

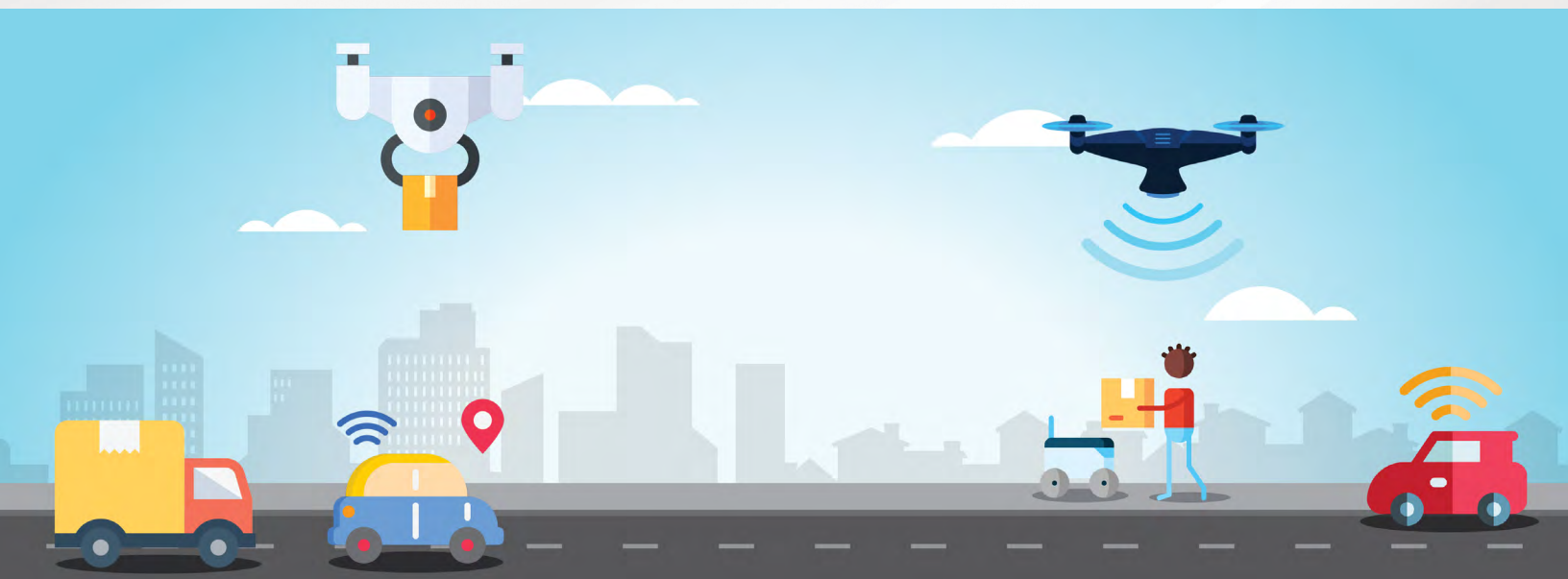


Connecting **North Texas** Communities
with Emerging Transportation Technologies

AV2.1

Focus Groups Report

The North Central Council of Governments (NCTCOG)
February 2022



North Central Texas
Council of Governments



KITTELSON
& ASSOCIATES

Hummingbird



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I. Overview

The North Central Texas Council of Governments (NCTCOG) launched AV2.1 (“Connecting North Texas Communities with Emerging Transportation Technologies”) to better prepare the region for future transportation technologies. Kittelson and Associates, Inc. appointed Consumer and Market Insights, LLC (CMI), as part of the Engagement Team, to conduct 12 focus groups on the topic of current and future transportation and communication needs within the NCTCOG 16-county region of North Central Texas. This region of North Central Texas, which centers around the two urban centers of Dallas and Fort Worth, includes over 230 member governments including numerous counties, cities, school districts, and special districts.

The purpose of the focus groups was to gain a deeper awareness of the public’s perspective on current, new, and emerging transportation technologies. The study goal was to better understand the public’s:

- 1) Interests, needs, and challenges as it relates to **current technology**
- 2) Preferences, behavior trends, and perceptions as it relates to **emerging and new technologies**

Specific areas of interest include:

Current Technology

- What technologies does the public currently use daily?
- How accessible and reliable are these technologies?
- What other challenges does the public face with these technologies?
- How does the public perceive these challenges?

Emerging and New Technologies:

- What is the public’s perspective on future technologies?
- What future technologies are they familiar with?
- How would these technologies make their lives easier?

This insight will be instrumental in providing directions to assist agency planners and other stakeholder groups as they make plans to meet the needs of the community as it relates to current, new and emerging transportation technologies.

II. Results

In general, focus group participants took a sincere interest in the topics and were very willing to participate. They openly shared their observations and opinions. It was sometimes difficult for some to grasp future concepts, but they asked clarification questions where needed and answered the questions. Participants expressed their appreciation of being asked for their input instead of just being told what they were going to get; this was especially the case with the minority and rural groups.

Commonalities Across Groups

All groups (General Population, Rural, Minorities)

- Use their personal cars daily as primary form of transportation
- Have concerns about the amount of traffic on roadways
- Are frustrated with the slowdowns of constant and many long construction zones
- Use map apps (*except for a few from the minority groups that do not own smart phones*)
- Have concerns about internet connectivity and dead zones when driving
- Expressed common issues about the cost of gas and insurance

Differences Between Groups

General Population vs Rural

Rural groups:

- Feel they have too few transportation options, i.e., no mass transit, limited ridesharing
- Do not have as many internet service provider options
- Experience issues with freight trains blocking major thoroughfares

General Population vs Minorities

Minority groups:

- Are more excited about some future technologies
- Have doubts that future technologies will be fair and equitable to all groups
- Are concerned about the lack of services for the disadvantaged that could benefit the most from future technologies: disadvantaged and senior groups

Primary Groups

General Population

Counties: Collin, Dallas, Denton, and Tarrant

The general population groups were characterized as counties having a population of greater than 600,000. The counties that composed this group included Collin, Dallas, Denton, and Tarrant Counties.

All participants' primary **mode of transportation** is personal cars they use daily. Some try to use the train when possible. They also expressed an interest in walking, carpooling, and ridesharing, if available. The personal car mode of transportation was used most frequently because of convenience, reliability, and availability. They dislike using their personal car because of traffic, construction, and the cost of operating personal cars. Participants stated local travel would be improved by the following: access to light rail, better planning prior to development, less construction, no tolls, and regular review and adjusted timing of traffic lights.

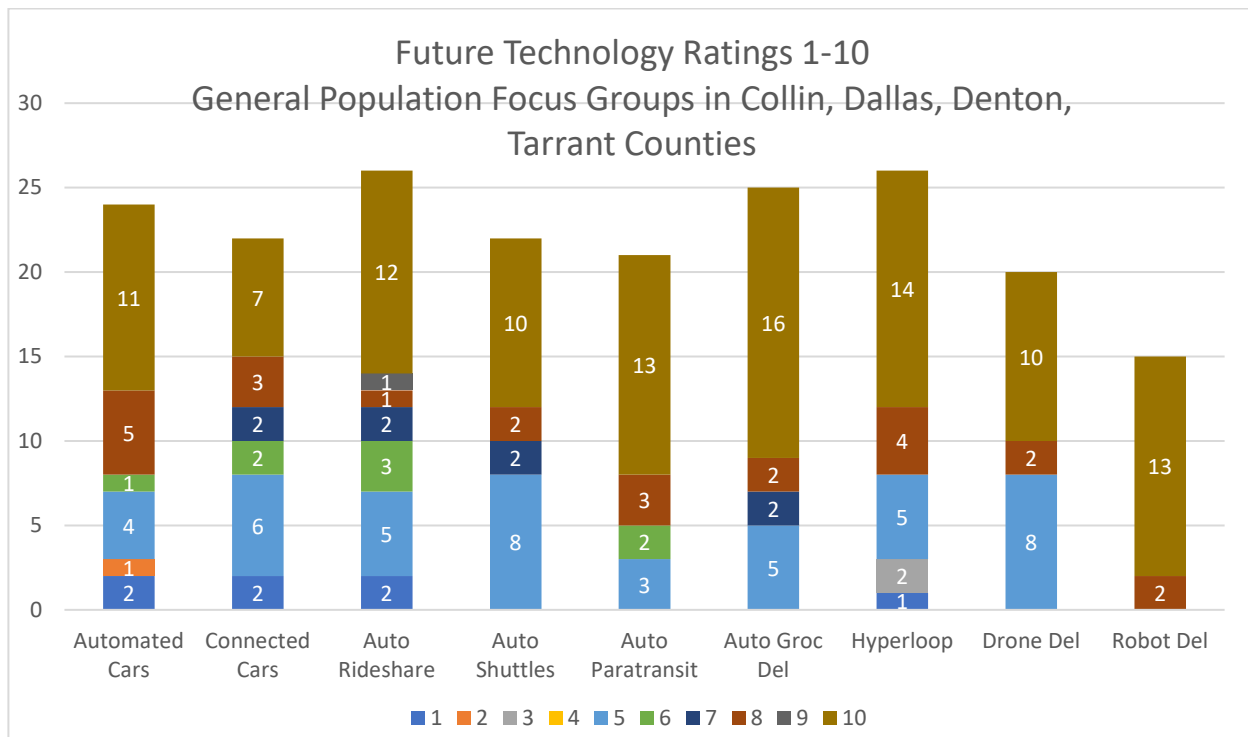
In terms of **communication**, most participants use cell/smartphones and have home and or work internet access. Only a few use public internet because of privacy concerns. They like having information at their disposal and having the ability to work remotely and collaborate. Most communications concerns dealt with poor connections, fewer provider choices, cost of the service, and inaccessibility of internet especially in the underserved communities. Most feel that communication would be better with lower service costs, better and faster internet, and more security. Some participants think that the service should be free or at least government subsidized. There was also the suggestion by some that it be treated as a utility because of it being essential in the current times and future.

These participants used Google Maps and Waze as their predominate **transportation-related cell phone apps**. However, they expressed concerns about accuracy of the mapping apps and poor connectivity when driving. A few participants said they use DART GoPass, Apple Car Play, and rideshare apps, like Lyft and Uber. They said communication and transportation interfaces could be better implemented with infrastructure improvements, app-to-app connectivity, and operational consistency.

Changes that have affected participants because of the **pandemic** include more tele-medicine, working remotely, ordering more online, more virtual meetings and overall, less social interaction.

This group seemed to have the largest number of attendees who might be considered early adopters of **future transportation technologies** in theory. This group rated the future transportation technologies concepts the highest (see Appendix A). There was a high degree of enthusiasm for the more futuristic options, specifically about the Hyperloop, Automated Grocery Store Delivery and Automated (Self-driving) Paratransit Service. Connected Cars were the least regarded and least understood. A common concern of all the technologies was safety and not trusting the technologies would not be hacked. Other concerns include issues with slow and spotty internet services and dead zones. While many see a need for Automated

Paratransit Service, most feel this service would require some human assistance to be safe in this environment.



Note: A rating scale of 1-10 was used (10 being “strongly like” and 1 being “strongly dislike”). See Appendix A for detailed description of future transportation technologies discussed.

Rural

Counties: Hood/Johnson, Ellis/Kaufman, Parker/Wise, Ellis, Hunt/Rockwall

These focus group participants use their personal vehicle as their primary **mode of transportation** because it is the most convenient, given that options are more limited than in metro areas. A few participants listed walking and carpooling as a form of transportation. Uber was mentioned, but there are not as many Uber or other rideshare drivers in these remote areas. One participant takes the train at least once or twice per week, but the downside is it is a long drive to get to the train station. Most participants said the drawback to using a personal vehicle is the amount of traffic, condition of roads and cost of car maintenance. Participants from Hood/Johnson and Ellis/Kaufman focus groups said a big issue is the frequency of being held up by freight trains for long periods of time. These participants believe that travel would be better with more options like buses, trains, and ridesharing. Additionally, participants would like to see less construction, fewer cars on the roads and a train running along I-20 to get to the metro area.

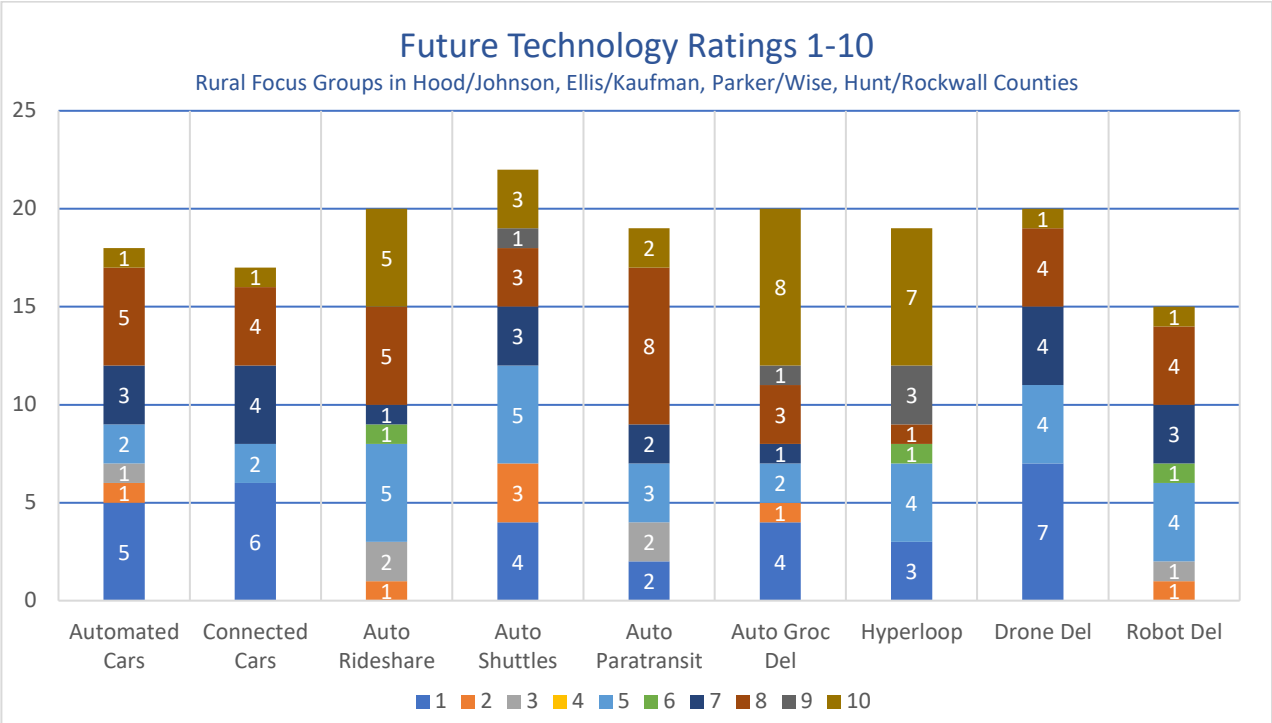
Most participants use their cell/smartphone and internet at home and work daily as their primary form of **communication** because it allows communication with people all over the country and they feel more connected to the world. Additionally, the accessibility, affordability, and availability are a plus. Some dislike the overall cost of the service, very poor connections that make it difficult to work from home, internet outages that last for days and lack of hot spot reliability. Participants said life in these communities could

be better with the following: chain convenience/gas stores like QT or RaceTrac; transportation for people without cars, the elderly and disabled; and better high-speed internet service like fiber-optics.

These participants predominate **transportation related cell phone apps** used are Google Maps and Waze. Participants like no longer needing paper maps, knowing where they are most of the time, the convenience and ease of use of apps and the improved lifestyle. They use rideshare apps Uber and Lyft the least except when on vacation. Many use DART GoPass and TollTag apps when they are in the DFW area. Participants’ primary dislikes are having their whereabouts tracked by others, dead zones, having to push buttons while driving, no Uber in the area, and inaccuracy of some apps. The group felt communications apps could be better with improved availability, education on how to use apps, better accuracy and connectivity, dashboard apps integrated into every vehicle to minimize phone distractions, and more frequent updates.

Participants changed how they lived during the **pandemic** in many ways, such as more videoconferencing, working from home, less travel, avoiding crowds, walking more, more online shopping for groceries and food deliveries when possible, and telemedicine doctor appointments. Many of the pandemic changes accentuated the issues with internet service. A couple of the younger participants in these groups mentioned the feeling of isolation and their mental health was affected as relationship dynamics were changing. The ability to connect via Facetime and the internet was helpful.

The participants in these groups were not overly enthusiastic about the **Future Transportation Technologies**. The Automated Grocery Delivery and Hyperloop received the most positive ratings, but even with that, the reception was lukewarm. Other technologies consistently received low to average ratings with the primary concerns being of job loss, lack of control, safety, and security. Some participants were anxious for landowners who have land in Ellis and Kaufman areas if the Hyperloop runs from Dallas to Houston.



Note: A rating scale of 1-10 was used (10 being “strongly like” and 1 being “strongly dislike”). See Appendix A

for detailed description of future transportation technologies discussed.

In general, these participants were uneasy about transportation and support services for senior citizens, those on Medicaid and non-English speakers.

Focus group highlights:

- (1) The Parker/Wise group included the oldest participant, a 95-year-old woman who drives a Silverado truck. She is excited about what the future holds. She is very active in her community. She frequently provides rides to medical appointments for the 'elderly' and delivers food to them because of a transportation need in Parker County.
- (2) The Ellis/Kaufman focus group had a participant with an advanced driver assistance system on her vehicle. She said that she is not ready to give as much control over to the vehicle as she could, but the function is there.

African American Groups

Counties: Dallas and Tarrant

Most participants use their personal cars as their primary **mode of transportation** and a few use buses and trains most often. Some participants said they use rideshare (3-4 times per year) and walk (1-2 miles per day). Participants use personal cars most often because of comfort, convenience, and reliability. The major dislikes about personal cars included traffic, cost for gas and maintenance, and an increase in road rage. Participants feel it would be better for the community if there was an improved transportation system, enough bus routes being closer, damaged roads, less construction, cheaper gas, ability to walk to trains and more accessibility for the physically challenged.

This group uses home internet and smartphones daily as their primary form of **communication**. Participants like using these communication forms because it keeps them connected to others, allows for greater productivity and working seamlessly; also, it is much easier to find information. The drawback of these services includes lack of connectivity of all devices controlled by one source, outages in the community, slow and spotty coverage in some areas, reduced speed during and since COVID, and it can make one lazy. There is a lot they dislike about the internet and phones, but understand they are necessary. The group feels internet and smartphones could be better with the following: better and cheaper Wi-Fi across the community, increased privacy, simplified use for older residents, training and in general more options for service.

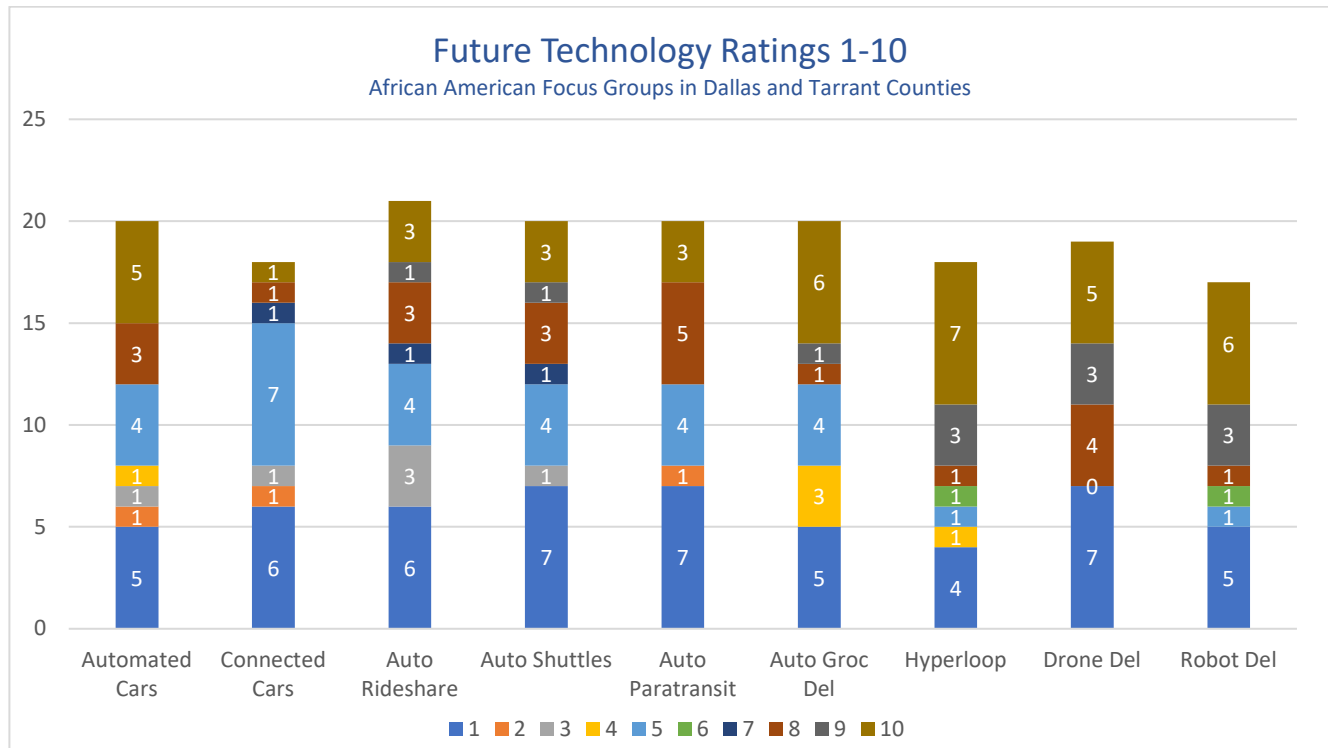
The group uses the following **transportation related cell phone apps** several times a day: Google Maps, Waze, Apple Car Play, Toll Tag, DART GoPass, Uber, Lyft, and mobile parking. Uber and Lyft are used less frequently. The group said the apps are useful for discounts and for checking prices rather than driving from store to store; it saves time and makes one more productive; convenient and allows access to the world. Some don't like phone apps but understand they are necessary; also, don't like remembering so many usernames and passwords. There are issues with service interruptions and downtime. There are also too many apps, and it takes too long to find them. Some mentioned more tutorials for using apps would be useful.

Many participants expressed there is a huge digital divide (disparity) between some communities. Cell phones could be better with more availability and easier usability for seniors and more widespread availability in general.

Participants said the **pandemic** has changed things for so many people including having to wear masks, more online medical appointments, having items delivered, less dining out, and a slower lifestyle. Some said they must use technology more and have become more dependent on the internet with virtual meetings and online school.

The Automated Grocery Delivery and Hyperloop are the **Future Transportation Technology** concepts that rated the highest with this group. While these technologies were rated the highest, there are still things the group dislikes, such as the impact on jobs with both technologies. There are concerns with the Hyperloop, such as costs associated with the project, disruption to the landscape, and safety concerns. The group did not necessarily like the other technologies and went so far as to state that they don't trust

Automated Cars and Connected Cars. This group also had a concern that those who could benefit the most from the future technologies will have the least access.



Note: A rating scale of 1-10 was used (10 being “strongly like” and 1 being “strongly dislike”). See Appendix A for detailed description of future transportation technologies discussed.

Hispanic/Latino Focus Groups

Counties: Dallas and Tarrant

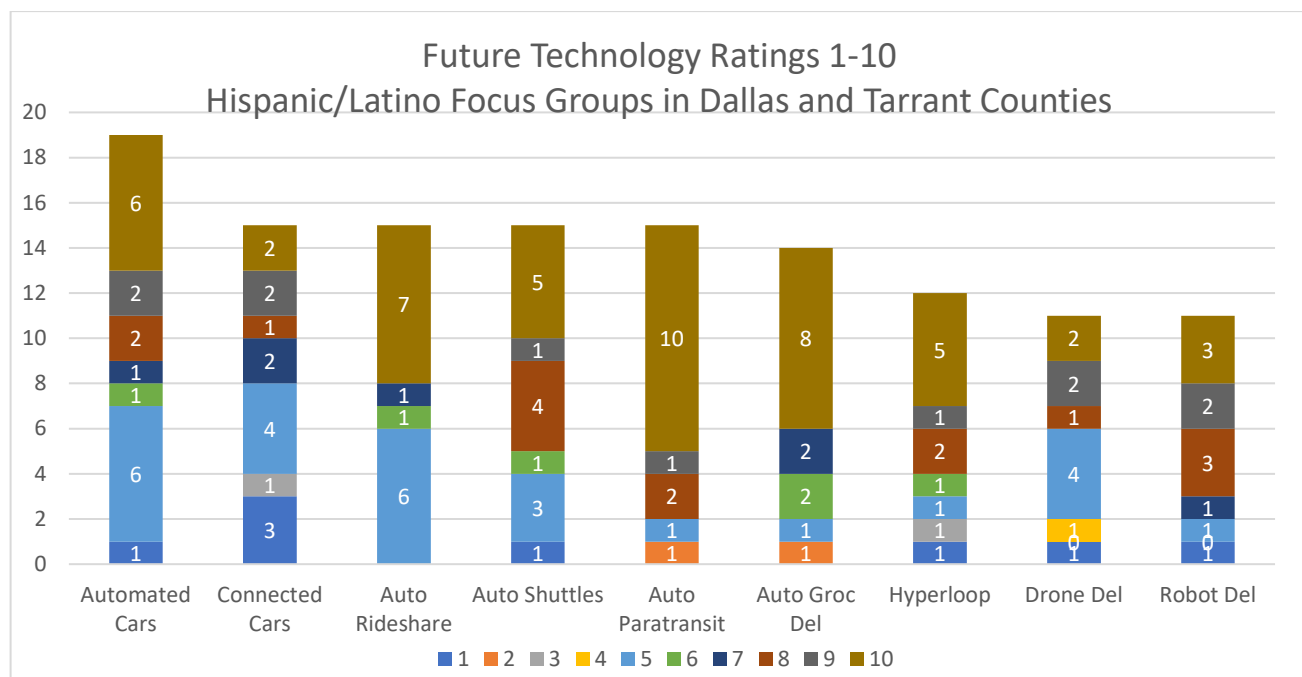
These participants use their personal cars more than any other **mode of transportation**, along with taxis, bikes, and some walking. The participants like using their personal cars daily because of convenience, reliability, the freedom to travel, and it allows independence. The things they do not like about using their personal cars are traffic, maintenance costs, gas prices, construction, and the unsafe way that others drive. Things that would make transportation better include better roads and routes, traffic light systems working more efficiently, solving infrastructure problems, more efficient mass transit and smaller buses, re-evaluate DART service/coverage, and less traffic.

These participants use the standard forms of **communications** like phone/smartphone, home, and work internet daily. They like these forms of communications because they are convenient, can connect with family, get tasks done fast and easily. Primary dislikes of these communications are sporadic disconnections, coverage is not enough, unwanted advertisements, spam calls and texts, technologies not easy to use, and expensive phone bills. Additional tower routes for good traffic patterns, improved security and privacy would make the whole process better.

The typical **transportation related phone apps** that are used most often are Google Maps, Waze, Apple Car Play, Uber, Lyft, Toll Tag, Mobile Parking, and OnStar. Some apps are used daily but others, like Uber, are only used when traveling. The things they like the most are easy, convenient to use in the car, reliability, allows connections to others, and cuts down on wait time while driving. Primary app dislikes are maps are not hands-free, inaccurate Google voice instruction, privacy, ads, people looking at phones while driving, loss of signal, and cost of services. The apps could be better by improving privacy, more map accuracy, reduced costs, more reliable apps, communication between apps, improved connections, more apps with voice commands, and app education.

The **pandemic** changed the way the group lives and travels many ways including more virtual events, no air travel, more online shopping, telemedicine, and working remotely. Some mentioned that they learned new applications with their children having online school, had no in-person church, fewer family gatherings, and saved more money.

The group's ratings for the **Future Transportation Technologies** did not indicate any overwhelming interest in any of the technologies. The Automated (self-driving) Paratransit Services and Automated Grocery Delivery received the highest ratings. They liked the fact that people with disabilities could have a way to get around but disliked the lack of human intervention. Many found the Hyperloop interesting and would consider that technology in the future to reduce travel time.



Note: A rating scale of 1-10 was used (10 being "strongly like" and 1 being "strongly dislike"). See Appendix A for detailed description of future transportation technologies discussed.

These participants expressed concern for those who might not be able to afford the services and the ability of apps being accurately translated into different languages. They also see the need for better public

transportation accessibility, better bus safety and wait time in cities, and better public transportation in rural communities. Participants stated while technology is accepted, it is important not to get rid of jobs and human connections.

III. Plan

This plan included the NCTOG 12-County Dallas-Fort Worth Metropolitan Planning Area (MPA) that consists of Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties to ensure a representation of the DFW Region. This approach incorporated unique differences of the counties including transportation system operations and jurisdictions, and traditional characteristics (age, ethnicity, gender, etc.).

Methodology

CMI developed a comprehensive plan to capture the thoughts and opinions of the 83 participants from the Dallas Fort Worth MPA. This plan required the focus group team to identify locations in the community to hold the focus groups. CMI partnered with Chambers of Commerce, community organizations, and other stakeholder groups to coordinate community outreach efforts. Venues used for the focus groups included community rooms in Recreation Centers, an Art Gallery, a church fellowship hall, an office suite conference room, private school conference room, and City Council Chambers.

Twelve focus groups were held over a three-week period in October and November 2021. The focus groups were segmented by General Population, Rural, African American, and Hispanic/Latino.

Groups	Counties
General Population	Collin County Dallas County Denton County Tarrant County
Rural	Hood and Johnson Counties Ellis and Kaufman Counties Parker and Wise Counties Hunt and Rockwall Counties
Minority	Dallas County African American Group Dallas County Hispanic/Latino Group Tarrant County African American Group Tarrant County Hispanic/Latino Group

Locations

Focus group locations are detailed below.

Dates	Target Counties	Groups	Locations
<i>October 2021</i>	Collin	General	Caddo Office Reimagined Plano, TX
	Dallas	African American	St. Phillips Community School Dallas, TX
	Hood & Johnson	Rural	Cresson City Hall Meeting Chamber Cresson, TX
	Tarrant	African American	Fort Worth Central Station Fort Worth, TX
	Tarrant	General	Fort Worth Central Station Fort Worth, TX
<i>November 2021</i>	Dallas	General	Farmers Branch Recreation Center Farmers Branch, TX
	Dallas	Hispanic/Latino	Anita Martinez Recreation Center Dallas, TX
	Denton	General	Green Valley Baptist Church Aubrey, TX
	Ellis & Kaufman	Rural	Ennis Welcome Center Ennis, TX
	Parker & Wise	Rural	Springtown Courthouse Annex Springtown, TX
	Rockwall & Hunt	Rural	Rockwall Recreation Center Rockwall, TX
	Tarrant	Hispanic/Latino	Artes de la Rosa Fort Worth, TX

Counties

The focus group team extended invitations to residents from each county to participate in the focus groups using multiple communication and outreach methods that included social media, email blasts from Chambers of Commerce, Lions Clubs, college campus email blasts, shopping mall face-to-face invites and word of mouth. Residents from the following counties participated in the focus groups:

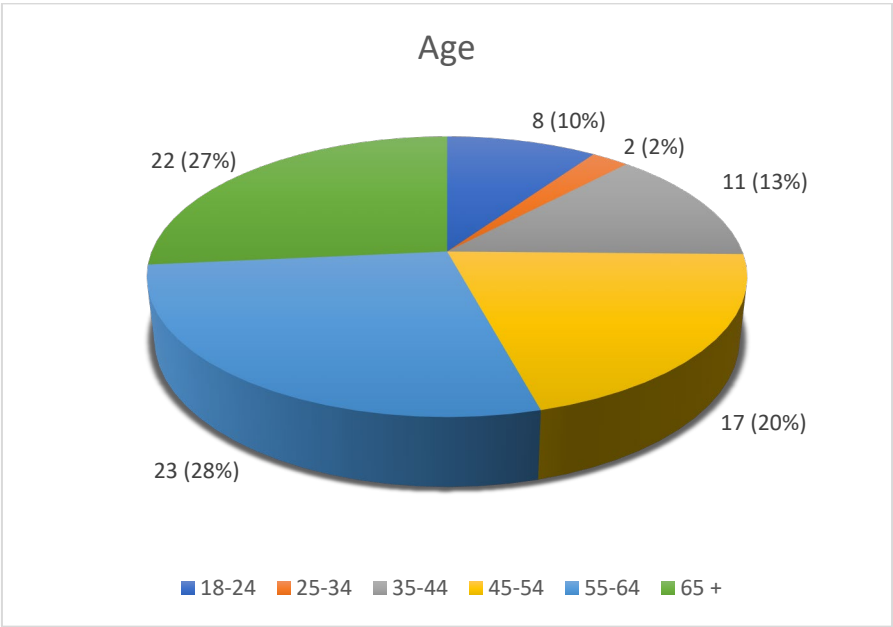
Collin	Hood
Dallas	Parker
Denton	Rockwall
Ellis	Tarrant

No residents from Hunt, Kaufman, Johnson, and Wise Counties participated despite the same communication and outreach methods used for the other counties. We recommend future focus groups be held in each rural county since the counties are large and widespread.

Demographics

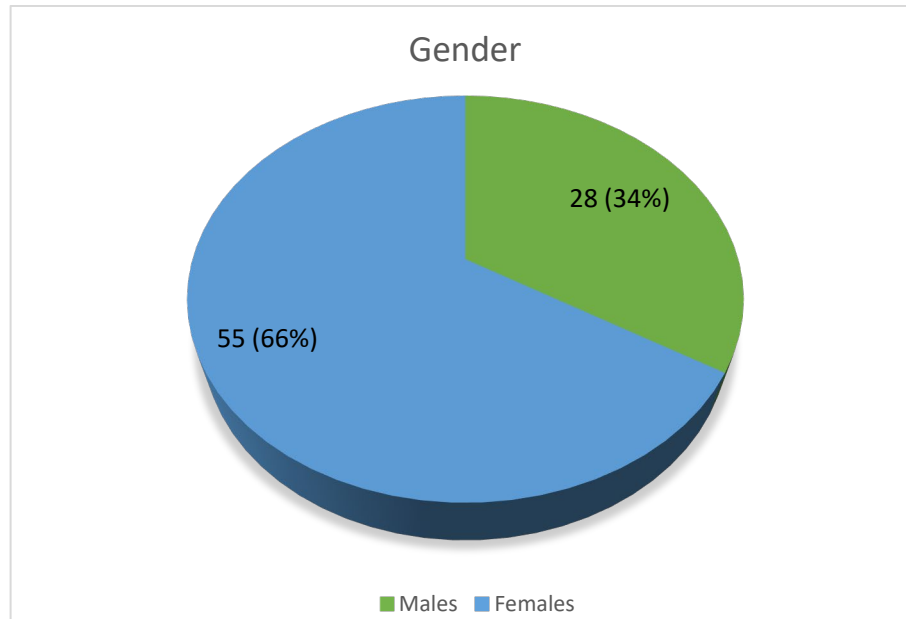
Age

Participants’ ages ranged from 18 - 95 years. Five generations were represented in the focus groups: Gen Z (18 – 24 years), Millennials (25-40 years), Generation X (41-56 years), Baby Boomers II (57-66 years), Baby Boomers I (67 – 75 years), Silent (76 – 95 years).



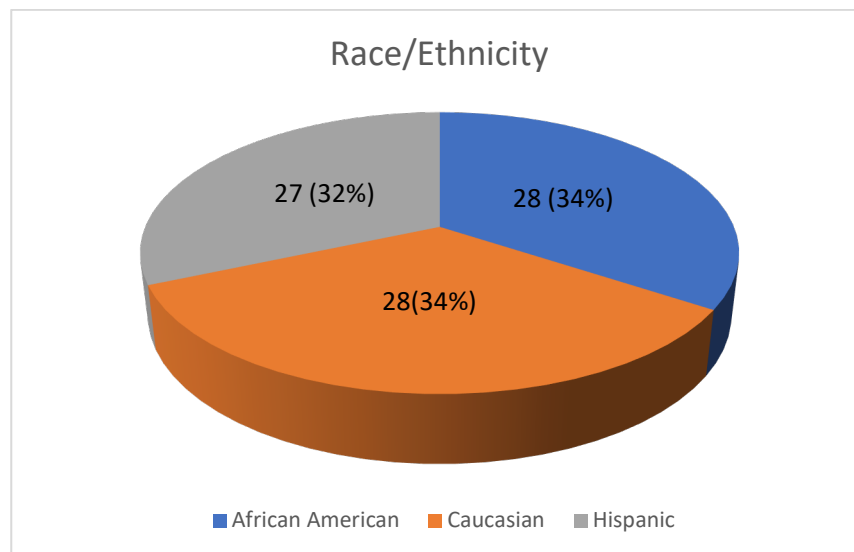
Gender

There were more women than men who elected to participate in the focus groups.



Race/Ethnicity

There was representation from all three target groups: Caucasians, African Americans, and Hispanics.



Questions

Transportation Technology- Now and in the Future

- What comes to mind when you hear the word **Transportation**?
- What comes to mind when you hear the words **Transportation in the Future**?
- What is one word or phrase that describes your **Automated Vehicles**?

Your Current Transportation Experiences and Needs

- What FORMS of TRANSPORTATION do you currently use to travel?
- What FORMS of COMMUNICATION do you currently use?
- What TYPE of TRANSPORTATION RELATED CELL PHONE APPLICATIONS (Apps) do you use?
- How has the pandemic changed the way you live and travel?

Future Transportation Technologies

- How would you rate future technologies?
- As technology continues to advance, which of these technologies would you and your household consider using in the future?
- If you could pick one thing to make your life easier with automated transportation, what would it be?
 - Automated Cars (partially or fully self-driving cars)
 - Connected Cars (cars that use the Internet to communicate with other cars and infrastructure)
 - Automated Ridesharing Services (e.g., UConner, Lyft, Uber) or Car
 - Sharing Services (e.g., Zipcar, Turo, Get Around)
 - Automated Self-Driving Shuttles
 - Automated Self-Driving Paratransit Services (e.g., for people with disabilities)
 - Automated Grocery Store Delivery
 - Hyperloop (high-speed train that travels through tubes)
 - Drone Delivery
 - Robot Delivery

IV. Conclusions/Recommendations

- These focus group results provide a deeper dive from a research/insight perspective on current, new, and emerging transportation technologies as it relates to three key stakeholder groups: General Population, Rural, Minority (African American and Hispanic).
- Information from these three segment groups, comparing similarities and differences between the groups is important to better understand the perspective of North Central Texas Region public communities is important for:
 - Recognizing regional opportunities for improving the quality of life in North Central Texas as it relates to transportation technologies and communication, especially in rural counties and underserved communities.
 - Designing more robust plans and programs to better meet the needs of public stakeholders in designated service areas.
- Focus group attendees said the time they spent time and knowledge/insight they gained from the focus groups was very helpful. The groups asked to receive some level of feedback on the focus group results.
- Look for ways to implement small changes to show the public that improvements are happening, and forthcoming.

V. Appendix A: Future Transportation Technologies Images

Focus group participants rated the following Future Transportation Technologies Images on how likely they would use or see the technologies as realistic in their lives.



- A- Automated Cars (partly or fully self-driving cars)
- B- Connected Cars (cars that use the Internet to communicate with other cars and infrastructure)
- C- Automated Ridesharing Services (e.g., UConner, Lyft, Uber) or car-sharing services (e.g., Zipcar, Turo, Get Around)
- D- Automated (Self-driving) Shuttles
- E- Automated (Self-driving) Paratransit Services (e.g., for people with disabilities)
- F- Automated Grocery Store Delivery
- G- Hyperloop (high-speed train that travels through tubes)
- H- Drone Delivery
- I- Robot Delivery

VI.Appendix B: Focus Groups Supporting Comments

Focus group participants were divided into three primary groups: General Population, Rural, Minority. All participants were asked the same questions and their responses are reported by group.

General Population Focus Groups - Collin County

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Vehicles • Cars, trucks, and trains • Buses and trains • Getting from one place to another
What comes to mind when you hear the words "Transportation in the Future"?	• Electric cars (2) • More accommodation • Future vehicles
What comes to mind when you hear the words "Automated Vehicles"?	• Non-gasoline cars (2) • Vehicles that operate themselves (2) • Scary

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal car (4) • Carpool • Ride share • Walk How often? • Multiple times throughout the day (2) • Every day (2) What do you LIKE about the forms of transportation you use? • Convenient (2) • Faster (2) • Available (2) • Reliable • Comfortable
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	• Can go where I need when I need What do you DISLIKE about the forms of transportation you use? • Cost (2) • Traffic • Toll fees What would make it better for you and others? • More access to public transportation (2) • Less traffic (2) • Less construction • Cheaper tolls
What FORMS of COMMUNICATION do you currently use?	What Forms of COMMUNICATION do you currently use to travel? • Smart phone (4) • Smart phone apps (3) • Blue Tooth (3) • Home Internet (3) • Work Internet How often? • Several times a day (3) • Every day What do you LIKE about the forms of communication you use? • Fast source of information (3) • GPS (2) • Staying connected with friends and family What do you DISLIKE about the forms of communication you use? • Poor connections, dead zones (3) • Lack of Privacy (2) • Spam What would make it better for you and others? • Faster internet • Better security • Better regulation of material on internet

	• More cell sites throughout city • People having patience with drivers who are not familiar with the area
What FORMS of TRANSPORTATION - RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (4) • Mobility as a Service apps (2) • Ride-hailing apps (2) • Vehicle applications platforms (2) • Smart Parking How often? • Every day (2) • Once a week (2) What do you LIKE about the apps you use? • They make getting around easier (2) • Accuracy • Convenience What do you DISLIKE about the apps you use? • Sometimes map directions are confusing (3) • Slow speed What would make it better for you and others? • Consistency among apps • Better speed on apps • Push notifications
How has the pandemic changed the way you live and travel?	• On-line doctor appointments (3) • Video conferencing (2) • Shopping on-line (2) • Working from home • Ordering groceries on-line • Using food delivery • Allowed us to become entrepreneurs

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 • Automated cars (3)
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*(Refer to
Appendix A to see
rating scale
images)*

- Automated paratransit services (3)
- Automated grocery store delivery (3)
- Hyperloop (3)
- Connected cars (2)
- Automated ridesharing services (2)
- Automated (self-driving) shuttles (2)
- Drone delivery (2)
- Robot delivery

Rating = 9

- Drone delivery (1)

Rating = 8

- No responses

Rating = 7

- No responses

Rating = 6

- No responses

Rating = 5

- Automated ridesharing services (1)
- Automated (self-driving) shuttles (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 4

- Robot delivery (1)

Rating = 3

- Automated cars (1)
- Connected cars (1)
- Automated paratransit services (1)
- Automated grocery store delivery (1)
- Hyperloop (1)

Rating = 2

- Automated cars (1)

Rating = 1

- Automated cars (1)
- Connected cars (1)
- Automated ridesharing services (1)

What do you LIKE about the future technology image?

A - Automated cars

- Transportation for those who don't drive (2)
- Makes multitasking easier

B - Connected cars

- Better communication (2)
- Safer

C - Automated ridesharing services

- Cheaper, faster, easier
- Provides transport for non-drivers

D - Automated (self-driving) Shuttles

- Can focus on other things while traveling
- On-time

E - Automated paratransit services

- Great help for disabled (3)

F - Automated grocery store delivery

- Good for elderly and those who can't get out of house (2)
- Skip the lines at the store

G - Hyperloop

- Faster, quick travel (4)

H - Drone delivery

- Faster (3)

I - Robot delivery

- Faster (3)

What do you DISLIKE about the future technology image?

A - Automated cars (partly or fully self-driving cars)

- Distrust of technology (2)
- Car can be controlled remotely

B - Connected cars

- Safety
- Unnecessary

C - Automated ridesharing services

- Maintenance issues
- Someone else in car might be sick

D - Automated (self-driving) shuttles

- No one there to control things in difficult situations (2)
- Loss of jobs
- Security

E - Automated paratransit services

- Mental health issues

- Security

F - Automated grocery store delivery

- May get wrong items (2)
- Quality of food

G - Hyperloop

- Safety (3)
- Fewer stops

H - Drone delivery

- Order may not be accurate
- May deliver to wrong house

I - Robot delivery

- Accuracy,
- Safety
- Technology errors

As technology continues to advance, which of these images would you and your household consider in the future?

- A - Automated Cars (2)
- B – Connected Cars (1)
- E - Automated Paratransit Services (1)
- G - Hyperloop (3)
- H - Drone Delivery (1)

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A - Automated Cars – read or work while you travel
- G – Hyperloop

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	● Getting to a location (3) ● Travel (3) ● Vehicle mobility (2) ● Car (2) ● Bus (2) ● Train ● Movement
What comes to mind when you hear the words "Transportation in the Future"?	● Electric cars (4) ● More readily accessible transportation (3) ● Self-driving cars (2) ● More technology ● Elevated train ● Bullet train ● Eco-friendly travel ● Flying Cars
What comes to mind when you hear the words "Automated Vehicles"?	● Self-driving cars (5) ● SUV (2) ● Increased safety ● Less personal public transportation ● Tesla ● Necessity

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? ● Personal Car (14) ● Train (3) ● Taxi/Ride-share (3) ● Walk (2) ● Carpool ● Bike How often?
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- Multiple times throughout day (6)
- Daily (4)
- Personal Car – Once a week , Several times a week (3)
- Taxi/Ride-share – Several times a year (3)
- Several times a year (2)
- Walk – Daily (2)
- Carpool – Several times a week (2)
- Train – Once a week
- Bike – Once a week

What do you LIKE about the forms of transportation you use?

- Go where I want when I want (6)
- Personal car – reliable (5)
- Convenient (4)
- Comfortable (3)
- Safe (2)
- Quick (2)
- Personal
- Train – reliable
- Safe
- Walk – quick
- Carpool – cost effective
- Companionship in car

What do you DISLIKE about the forms of transportation you use?

- Personal car – Cost (9)
- Traffic (5)
- Unsafe drivers (2)
- Carpool – schedule dependent upon other people (2)
- Unsafe roads
- Emission
- Construction
- Can't get directly to my destination

What would make it better for you and others?

- Personal car – being able to carpool (3)
- Better built vehicles
- Safer road
- Minimum speed limits enforced on highways
- Less construction
- Trains – metro system
- More accessibility

What FORMS of COMMUNICATION do you currently use?

What Forms of COMMUNICATION do you currently use to travel?

- Home Internet (12)
- Smart Phone (12)

- Smart Phone Apps (8)
- Blue tooth (7)
- Work Internet (4)
- Public Internet (4)
- Cell Phone without internet (3)

How often?

- Home Internet – Multiple times throughout day (7), Daily (5)
- Smart Phone – Daily (6), Multiple times throughout day (6)
- Smart Phone Apps – Daily (4), Multiple times throughout day (4)
- Blue Tooth – Daily (5)
- Multiple times throughout day (2)
- Multiple times throughout day (2)
- Several times a week (2)
- Public Internet – Daily
- Cell Phone without internet – Daily
- Work Internet – Daily

What do you LIKE about the forms of communication you use?

- Home Internet – Convenient (5)
- Smart Phone Apps – Convenient (4)
- Reasonable cost (3)
- Smart Phone – Convenient (3)
- Good connection (2)
- Blue Tooth – Convenient (2)
- Work Internet – Convenient (2)
- Public Internet – Convenient (2)
- Cell Phone without internet – Reasonable cost (2)
- Privacy, easy access, able to conduct a business from home
- Good connection
- Privacy
- Reasonable cost
- Easy to use
- Answers at fingertips
- Easy to use
- Good connection
- Easy access
- Consistent, convenient, able to connect with people

What do you DISLIKE about the forms of communication you use?

- Smart Phone – Lack of privacy and security (5)
- Poor connections (4)
- Home Internet – cost (4)
- Poor connections (4)

	• Security and hacking concerns (3) • Lack of personal connection to others, advertisements • Cost (3) • Addiction to phone (3) • Work can reach me 24/7 What would make it better for you and others? • Smart Phone – more cell phone towers for better connectivity (5) • More cost efficient (4) • More security (4) • Improved security (4) • Home Internet – lower cost (2) • More accessible to more people • Smart Phone Apps – more user-friendly apps, no pop up adds • Cell Phone – people not using while driving
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (14) • Ride-hailing apps (6) • Mobility as a Service Apps (5) • Vehicle application platforms (5) • Smart Parking Apps (5) • Door Dash (2) How often? • Navigation apps – daily , once a week , 1-3 times a month , multiple times throughout day (3), several times a week (6) • Mobility as a Service apps – multiple times throughout day (2), once a week , several times a week • Ride-hailing apps – several times a week (2), 1-3 times a month • Vehicle application platforms – daily (3), multiple times throughout day • Smart Parking apps –several times a week (2), once a week, several times a year • Door Dash – several times a week (2) What do you LIKE about the apps you use? • Navigation apps – knowing where I am going (5) • Easy to use (3) • Can check on traffic (2) • Knowing how long it will take (2) • Ride-hailing apps – easy to use (2) • Convenient

	• Mobility as a Service apps – convenient, easy to pay • Vehicle application platform - convenient, makes driving more entertaining, automatic connection to apple play • Smart Parking apps – ability to find a parking spot in crowded venues, convenient • Door Dash – having food delivered, convenient What do you DISLIKE about the apps you use? • Navigation apps – Inconsistent or incorrect information (3) • Not always user friendly (2) • Vehicle application platforms – not working consistently (2) • Security and virus concerns, poor connections, ads, doesn't allow for how long traffic will take • Mobility as a Service apps – not always easy to use • Ride-hailing apps – poor connections, security, and virus concerns • Pushing buttons while driving • Smart Parking apps – not always easy to use What would make it better for you and others? • Navigation apps – updated maps (3) • More user friendly (2) • Smart Parking apps – easier to use (2) • Work consistently, less adds, more precise communication and timing • Ride-hailing apps – better security • Vehicle application platforms – easier access, voice commands • Information on what apps is available and how to use them
How has the pandemic changed the way you live and travel?	• On-line doctor appointments (7) • Video conferencing (7) • Shopping on-line (6) • Less people interaction, visiting (4) • Work from home (3) • Attending school from home (3) • Walking (2) • Ordering groceries on-line (2) • Using food delivery (2) • Driving rather than using public transit (2) • Less travel • Less job opportunities and more restrictions

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 • Automated Cars (6) • Automated paratransit (6)
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(Refer to
Appendix A to see
rating scale
images)

- Automated grocery delivery (6)
- Robot delivery (5)
- Automated (self-driving) shuttles (4)
- Connected Cars (3)
- Ride sharing (3)
- Hyperloop (3)
- Drone delivery (3)

Rating = 9

- Automated Cars (1)
- Automated Ride sharing (1)
- Automated grocery delivery (1)

Rating = 8

- Hyperloop (3)
- Automated Cars (2)
- Connected Cars (2)
- Automated grocery delivery (2)
- Automated (self-driving) shuttles (1)
- Drone Delivery (1)

Rating = 7

- Automated grocery delivery (2)
- Drone delivery (2)
- Connected Cars (1)
- Automated ride sharing (1)
- Automated (self-driving) shuttles (1)
- Automated paratransit (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 6

- Robot delivery (4)
- Connected cars (2)
- Automated Cars (1)
- Automated ride sharing (1)
- Automated paratransit (1)

Rating = 5

- Automated ride sharing (5)
- Drone delivery (5)
- Connected cars (4)
- Automated (self-driving) shuttles (4)
- Automated Cars (3)
- Automated paratransit (2)
- Robot delivery (1)

Rating = 4

- Automated (self-driving) shuttles (1)

- Automated paratransit (1)

Rating = 3

- Connected cars (1)
- Automated ride sharing (1)
- Hyperloop (1)
- Drone delivery (1)

Rating = 2

- Automated Cars (1)
- Connected cars (1)
- Robot delivery (1)

Rating = 1

- Hyperloop (2)
- Automated ride sharing (1)
- Automated (self-driving) shuttles (1)
- Automated grocery delivery (1)
- Robot delivery (1)
- Drone delivery (1)

What do you LIKE about the future technology image?

A - Automated cars

- Convenient (3)
- Makes travel easier (2)
- Benefits timid drivers (2)
- Safer automated. Not having to worry about other drivers
- Can get rest before getting to destination

B - Connected cars

- Safer (5)
- Easier travel (2)
- Less traffic (2)
- Faster, better traffic flow
- May keep you from making mistakes that cause an accident

C - Automated ridesharing

- Convenient (3)
- Less expense for car maintenance
- Reliable, provides other options
- Safer
- Easier to get places,
- Not having to drive, drop off and pick up at curb

D - Automated (self-driving) shuttles

- Provides other options (2)
- Convenient (2)
- Safer
- Better for the environment

- Less expense

E - Automated paratransit services

- Provides opportunity for mobility for people who might not otherwise be able to get around (9)
- Convenient
- Less pollution

F - Automated grocery delivery

- Convenient (6)
- Easy (3)
- No people contact
- No waiting

G - Hyperloop

- Faster (9)
- Convenient (2)
- Cost effective (2)
- Reliable
- Eco-friendly
- Travel long distance in short time
- Won't increase traffic

H - Drone delivery

- Fast (5)
- Convenient (4)
- Easier to get items
- No people contact

I - Robot delivery

- Fast (3)
- Convenient (3)
- Easier to get items (2)
- Safer for packages
- No people contact

What do you DISLIKE about the future technology image?

A – Automated Cars

- Possible technology failure (6)
- Human error (2)
- Takes the fun out of driving
- Still requires human supervision
- Safety concerns
- Expensive
- Reliability

B – Connected Cars

- Possible technology failure (3)
- Safety concerns

- Lack of control
- May cause accidents
- Scary
- Relying on car and being distracted
- Security

C – Automated Ridesharing

- Cost (2)
- Service not being available when needed (2)
- Privacy and safety from other passengers (2)
- Not very convenient

D – Automated (self-driving) Shuttles

- Reliability (2)
- Lack of control
- Not available where I need to go
- Possible hacking
- Dependent on other people

E – Automated Paratransit Services

- Could leave someone stranded due to technical failure (5)
- Safety of impaired passengers (2)
- Cost of equipment

F – Automated Grocery Delivery

- Technical failures (3)
- Like to do my own shopping (3)
- Might take too long for delivery
- Loss of jobs

G – Hyperloop

- Cost (2)
- No drivers
- Not enough stops
- Risky
- Crowded
- May take up farm land
- Politics surrounding creation

H – Drone Delivery

- Technical failure (4)
- Noise from drone (2)
- Package could get lost
- Easy to steal package
- Lack of security

I – Robot Delivery

- Technical failure (3)
- Possible damage to package (2)
- Package could get lost
- Loss of jobs
- Expensive
- Less human interaction
- Loss of jobs

As technology continues to advance, which of these technologies would you and your household consider in the future?

- A – Automated Cars are easier (7)
- B – Connected Cars (3)
- C – Automated Ridesharing services (4)
- D – Automated (self-driving) shuttles (3)
- E – Automated Paratransit Services are a great opportunity for disabled (5)
- F – Automated Grocery Delivery (6)
- G – Hyperloop (8)
- H – Drone Delivery (7)
- I – Robot Delivery (5)

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A – Automated Cars (6)
- B – Connected Cars
- E – Automated Paratransit
- G – Hyperloop (4)

General Population Focus Groups - Denton County

General Transportation Perspective

What comes to mind when you hear the word “Transportation”?	• Bus • Car • Movement
What comes to mind when you hear the words “Transportation in the Future”?	• Trains (3)

What comes to mind when you hear the words “Automated Vehicles”?

- Electric cars
- Less fuel
- Self-sustaining – very little human interaction

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?

What Forms of TRANSPORTATION do you currently use to travel?

- Personal car (3)
- Taxi
- Train

How often?

- Car – several times a week

What do you LIKE about the forms of transportation you use?

- Cost effective (2)
- Reliable (2)
- Reasonable wait times (2)
- Gets me to my destination
- Convenient
- Comfortable
- No stress

What do you DISLIKE about the forms of transportation you use?

- Traffic (2)
- Construction
- Tolls

What would make it better for you and others?

- Realistic pricing (2)
- Improved navigation through congestion
- Expanded train routes

What FORMS of COMMUNICATION do you currently use?

What Forms of COMMUNICATION do you currently use to travel?

- Home internet (2)
- Smart phone (2)
- Work internet
- Cell phone
- Blue tooth

How often?

	• Home internet – multiple times throughout the day • Smart phone – multiple times throughout the day; several times a week • Work internet – multiple times throughout the day • Cell phone – multiple times throughout the day • Blue tooth – multiple times throughout the day What do you LIKE about the forms of communication you use? • Consistent (2) • Good privacy and security (2) • Reasonable cost • Useful for checking email, weather, and calendar What do you DISLIKE about the forms of communication you use? • Slow service • Limited-service choices • Poor customer service or poor training • Monitoring my time What would make it better for you and others? • Having a more simple phone (2) • Having different apps • More options for service • Reliability of service
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (2) • Ride-hailing apps (2) • Vehicle application platforms • Mobility as a Service How often? If you don't use? • Limit use due to lack of storage space • Mobility as a Service – whenever I'm in the car • Ride-hailing apps – when traveling • Navigation apps – several times a month What do you LIKE about the apps you use? • Convenience (2) • Being able to get around when not familiar with an area • Variety of information and resources available • Auto pay ability What do you DISLIKE about the apps you use?

	• Dead zones • Technical malfunctions • Takes up a lot of cloud space What would make it better for you and others? • Shopping on-line (2) • Better reliability
How has the pandemic changed the way you live and travel?	• Order groceries on-line • On-line doctor appointments • Working from home • Church on-line • Limit the places I go

Future Technologies Image Ratings <i>(Refer to Appendix A to see rating scale images)</i>	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 - Automated paratransit services (2) - Automated grocery delivery (2) - Connected cars (1) - Automated ridesharing services (1) - Automated (self-driving) shuttles (1) - Robot delivery (1) Rating = 9 - No responses Rating = 8 - Automated ridesharing services (1) - Automated paratransit services (1) - Robot delivery (1) Rating = 7 - Automated ridesharing services (1) Rating = 6 - No responses Rating = 5 - Automated cars (2) - Hyperloop (2) - Automated (self-driving) shuttles (1) - Drone delivery (1) Rating = 4 - No responses Rating = 3 - No responses Rating = 2 - No responses Rating = 1 - Automated cars (1) - Automated (self-driving) shuttles (1) - Automated grocery delivery (1) What do you LIKE about the future technology image?
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A – Automated Cars

- Easier to see what is behind you when backing up
- Better for disabled or handicapped persons

B – Connected Cars

- Safety

C - Automated Ridesharing services

- Availability, ease,
- Cost

D - Automated (self-driving) shuttles

- No responses

E – Automated Paratransit Services

- Makes life simpler for special needs people

F – Automated grocery delivery

- Comfort, ease

G – Hyperloop
Speed

H – Drone Delivery

- Convenience

I – Robot Delivery

- Convenience (2)

What do you DISLIKE about the future technology image?

A – Automated Cars

- Distrust the technology
- Malfunctions (2)

B – Connected Cars

- Not comfortable with this, could be misused

C - Automated Ridesharing Services

- No responses

D - Automated (self-driving) Shuttles

- Not comfortable with safety

E – Automated Paratransit Services

- Would still need someone to assist the handicapped if needed

F – Automated grocery deliver

- Prefer to select own food (2)

G – Hyperloop

- Unproven technology

H – Drone Delivery

- Not sure of effectiveness, safety
- Technology problems
- Loss of jobs

I – Robot Delivery

- Technology failures
- Loss of jobs
- No human interaction

As technology continues to advance, which of these images would you and your household consider in the future?

- A - Automated Cars
- B – Connected Cars
- C – Automated Ridesharing services
- E – Automated Paratransit Services
- H – Drone Delivery
- I – Robot Deliver – (2)

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A - Automated Cars (2)
- G - Hyperloop/Trains

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Travel or moving from one place to another (3) • Rail • Mass transit
What comes to mind when you hear the words "Transportation in the Future"?	• More technology (2) • Mass Transit • Rail • Less vehicles on the road • The Jetsons
What comes to mind when you hear the words "Automated Vehicles"?	• Transportation requiring no driver or little to no human interaction (2) • Mass transit • Rail • Electric cars

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal Car (6) How often? • Multiple times a day (3) • Every day (2) • Several times a week What do you LIKE about the forms of transportation you use? • Get to my destination (2) • I can personalize my travel and destination • Reliable • Comfortable • Get me to my destination without waiting on someone else
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	What do you DISLIKE about the forms of transportation you use? • Traffic (6) • Cost (3) • Other driver's actions What would make it better for you and others? • More people using mass transit or rideshare (5) • Lower cost • Better synchronization of traffic signals
What FORMS of COMMUNICATION do you currently use?	What Forms of COMMUNICATION do you currently use to travel? • Home Internet (5) • Smart phone (5) • Bluetooth (3) • Cell phone without internet (2) • Work internet • Public internet How often? • Multiple times a day (3) • Daily (2) • Several times a week What do you LIKE about the forms of communication you use? • Consistent (3) • Good connection • Virtual appointments so I don't physically have to be present • Reasonable cost • Privacy and security • Instant information What do you DISLIKE about the forms of communication you use? • Poor connectivity (3) • Lack of human interaction (2) • Cost • Slow speed • Drivers texting and driving What would make it better for you and others? • Improved privacy and security (2) • People using safely while driving (2) • People putting their phones away and interacting • Better transmission

What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (6) • Ride-hailing apps (5) • Mobility as a Service apps (4) • Smart Parking apps (3) • Vehicle application platforms (2) • Food delivery How often? If you don't use? • Daily (4) • Multiple times per day • Several times a week What do you LIKE about the apps you use? • Convenience (2) • Ease of access (2) • Safety, less physical contact (2) • Time saving • Better informed • Fun to be able to see around the world in an instant What do you DISLIKE about the apps you use? • Lack of connectivity in some areas (2) • Poor technology on some apps (2) • Some apps do not allow automated update What would make it better for you and others? • Education or information on how to use (2) • Continuous updates • Ways to block cyber bullying or accessibility (2)
How has the pandemic changed the way you live and travel?	• Working from home (4) • Shopping online (4) • Online doctor appointments (2) • Video conferencing (2) • Ordering groceries online (2) • Food delivery • Driving rather than taking public transit • More aware of surroundings and people around me (2)

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings

(Refer to Appendix A to see rating scale images)

Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE)

Rating = 10

- Hyperloop (5)
- Robot delivery (4)
- Automated ride sharing (3)
- Automated grocery delivery (3)
- Drone delivery (3)
- Automated Cars (2)
- Automated shuttle (2)
- Connected cars (1)
- Automated paratransit (1)

Rating = 9

- Automated paratransit (1)

Rating = 8

- Automated Cars (2)
- Automated shuttle (2)
- Connected cars (1)
- Drone delivery (1)
- Robot delivery (1)

Rating = 7

- Automated ride sharing (1)
- Automated grocery delivery (1)

Rating = 6

- Automated Cars (1)
- Automated ride sharing (1)
- Automated shuttle (1)

Rating = 5

- Connected cars (2)
- Automated paratransit (2)
- Automated grocery delivery (2)
- Automated Cars (1)
- Automated ride sharing (1)
- Automated shuttle (1)
- Hyperloop (1)

Rating = 4

- No responses

Rating = 3

- No responses

Rating = 2

- No responses

Rating = 1

- Connected cars (2)
- Automated paratransit (1)
- Drone delivery (1)

What do you LIKE about the future technology image?

A – Automated Cars

- Less traffic
- Ability to multi-task
- Safer, smarter driving

B – Connected Cars

- Smarter decisions

C – Automated Ridesharing Services

- Convenience (3)
- Cost efficient
- Availability

D – Automated Shuttle

- Safer (2)
- Convenience
- More access (3)
- Ability to control

E – Automated Paratransit Services

- Provides accessibility and independence for a population group (3)
- Need more services like this

F – Automated Grocery Delivery

- Convenience (2)
- Less traffic (2)
- No crowds in store
- Trackable
- Saves on gas
- Safer

G – Hyperloop

- Speed (4)
- Efficient
- Modern
- Safe

H – Drone Delivery

- Safer (2)
- Smarter,
- New jobs

- Faster

I – Robot Delivery

- Safer (2)
- Less people handling
- Reliable

What do you DISLIKE about the future technology image?

A – Automated Cars

- Subject to human error (2)
- Mechanical failure

B – Connected Cars

- Safety hazards due to connectivity (2)
- Strain on internet
- Human error possibility
- Data tracking

C – Automated Ridesharing Services

- Drivers are not always good drivers
- Cost
- Possibility of breakdown or no-show

D – Automated Shuttle

- Potential mechanical failure (2)
- Puts humans out of work

E – Automated Paratransit Services

- No physical assistance for those who might need some (3)
- Possible emergency event
- May not be dependable

F – Automated Grocery Delivery

- Scheduling not always accurate
- Items not always as ordered

G – Hyperloop

- Derailing (2)
- Cost and accounting of funds
- Scar
- Lack of access

H – Drone Delivery

- Transmission difficulties
- Would not like my groceries flying in the air
- Not enough use

I – Robot Delivery

- Technical difficulties
- Not largely available
- Cost
- Possibility of hacking

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars (2)
- B – Connected Cars
- C – Automated Ridesharing services (2)
- D – Automated (self-driving) shuttles (4)
- E – Automated Paratransit Services (2)
- F – Automated Grocery Delivery (2)
- G – Hyperloop (3)
- H – Drone Delivery (4)
- I – Robot Delivery (4)
- Convenience, safety, reliability, lack of human error

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A - Automated Cars
- G - Hyperloop (2)

Minority Focus Groups (African American) - Dallas County

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Movement (2) • Buses (2) • Trains • Cars • How to get around in vehicles
What comes to mind when you hear the words "Transportation in the Future"?	• Faster, high speed movement (2) • Space travel • What transportation vehicles will look like in the future
What comes to mind when you hear the words "Automated Vehicles"?	• Vehicles without drivers (2) • High technology vehicles • Something out of this world, flying class • Destruction because of lack of person to control

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal car (3) • Bus (2) • Train (2) • Walk • Carpool
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How often?

- Personal Car – Multiple times throughout day (2)
- Bus – Several times a week
- Train – Several times a week
- Walk – Daily
- Carpool – Several times a week

What do you LIKE about the forms of transportation you use?

- Comfortable (4)
- Reliable (3)
- Safe (3)
- Get me to my destination (2)
- Cost Effective

What do you DISLIKE about the forms of transportation you use?

- Not enough bus availability close by (3)
- Traffic
- Cost of gas, upkeep, and insurance

What would make it better for you and others?

- More options for mass transit (3)
- Closer bus routes (2)
- Cheaper gas
- Less traffic

What FORMS of
COMMUNICATION
do you currently
use?

What Forms of COMMUNICATION do you currently use to travel?

- Cell phone w/o internet (4)
- Home Internet (3)
- Smart Phone apps (2)
- Blue Tooth (2)
- Work Internet
- Smart Phone

How often?

- Multiple times throughout day (3)
- Multiple times throughout day (2)
- Blue Tooth – Multiple times throughout day (2)
- Smart Phone – Multiple times throughout day
- Smart Phone apps – Multiple times throughout day
- Work Internet- Multiple times throughout day
- Home Internet – Daily
- Cell phone w/o internet - Daily

What do you LIKE about the forms of communication you use?

	• Ability to be connected to work and friends/family (2) • Ability to work from home • Privacy and security What do you DISLIKE about the forms of communication you use? • Inconsistent connection (2) • Cost (2) • People having immediate access to you What would make it better for you and others? • Greater availability to more people (2) • Lower cost • Better privacy and security
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (2) • Smart Parking apps (2) • Never use any (2) • Vehicle application platforms • Mobility as a Service apps • Ride-hailing apps • Food Delivery apps How often? • Navigation apps – Several times a week • Multiple times throughout the day • Smart Parking apps - Several times a week • Multiple times throughout the day • Vehicle application platforms - Several times a week • Mobility as a Service apps – Several times a week • Ride-hailing apps – Several times a week • Food delivery apps – Several times a week What do you LIKE about the apps you use? • Easy (2) • Saves time, productivity • Automatic application What do you DISLIKE about the apps you use? • Lack of security • Time it takes to download • Rerouting What would make it better for you and others?

	• Lower costs • 100% accuracy
How has the pandemic changed the way you live and travel?	• Video conferencing (2) • More frequent use of technology (2) • Working from home (2) • On-line doctor appointments (2) • Not able to see friends • Don't go out to eat, use pick-up instead • On-line shopping • Driving rather than using public transit • Increased productivity

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE)
<i>(Refer to Appendix A to see rating scale images)</i>	Rating = 10 • Hyperloop (2) • Robot delivery (2) • Automated grocery delivery (1) • Drone delivery (1) Rating = 9 • No responses Rating = 8 • Automated ridesharing services (1) • Automated grocery delivery (1) • Drone delivery (1) Rating = 7 • No Responses Rating = 6 • Robot delivery (1)

Rating = 5

- Connected cars (1)
- Automated ridesharing services (1)
- Automated paratransit services (1)
- Automated grocery delivery (1)
- Hyperloop (1)

Rating = 4

- Automated cars (1)

Rating = 3

- Automated cars (1)
- Connected cars (1)

Rating = 2

- Automated paratransit services (1)

Rating = 1

- Automated shuttle (3)
- Automated cars (2)
- Connected cars (2)
- Automated ridesharing services (2)
- Automated paratransit services(2)
- Drone delivery (2)
- Automated grocery delivery (1)
- Hyperloop (1)
- Robot delivery (1)

What do you LIKE about the future technology image?

A – Automated Cars

- Letting someone else do the driving (2)
- Safety

B – Connected Cars

- Availability to connect with others

C – Automated Ridesharing Services

- Safer

- Convenient

D – Automated (self-driving) Shuttles

- Would be good in as long as it doesn't hit anyone

E – Automated Paratransit Services

- Helpful to impaired or elderly

F – Automated Grocery Store Delivery

- Don't have to shop for yourself
- Helpful to the disabled

G – Hyperloop

- Faster
- Good for long trips
- More time to travel

H – Drone Delivery

- Faster deliveries
- Ability to stay home

I – Robot Delivery

- Faster deliveries
- Ability to stay home

What do you DISLIKE about the future technology image?

A – Automated Cars

- Safety (2)
- Possible technology malfunction

B – Connected Cars

- Internet inconsistency (2)
- Many cars may be involved if there is an accident

C – Automated Ridesharing Services

- Safety
- Need for disinfecting, having to trust unknown drivers

D – Automated (self-driving) Shuttles

- System malfunctions (2)
- Safety

E – Automated Paratransit Services

- Safety in case of a malfunction or problem (3)
- Loss of jobs

F – Automated Grocery Store Delivery

- Possibility of people harming your food

G – Hyperloop

- Safety

H – Drone Delivery

- Accuracy of order
- Loss of jobs

I – Robot Delivery

- Loss of jobs

As technology continues to advance, which of these images would you and your household consider in the future?

- C – Automated Ridesharing services
- F – Automated Grocery Store Delivery (2)
- G – Hyperloop, ability to travel more
- H – Drone Delivery
- I – Robot Delivery

If you could pick one thing to make your life easier with automated transportation, what would it be?

- E – Automated Paratransit Services
- H – Drone Delivery
- I – Robot Delivery

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Moving people from one location to another (4) • Public transportation (buses, trains, taxis) (2) • Ways to get around (2) • Planes (2) • Cars • Trains • Travel • Gas money and bus passes
What comes to mind when you hear the words "Transportation in the Future"?	• Fast, high-speed transport (7) • High speed trains (4) • Electric transport • Subways • Light Rail • Computer driven • Space travel
What comes to mind when you hear the words "Automated Vehicles"?	• Driverless vehicles (12) • Trains • Comfort • Reliability • Crazy • Electric cars

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal Car (14) • Taxi/Ride-share (2) • Walk (3) • Plane
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How often?

- Personal Car – Daily , Several times a week (2), multiple times throughout the day (11)
- Taxi/Ride-share – Several times a week , Several times a year
- Walk – 1 to 3 times a month (2), Daily
- Plane – Several times a year

What do you like about the forms of transportation you use?

- Comfortable (8)
- Reliable (7)
- Safe (4)
- Convenient (4)
- Can customize my route (2)
- Cost effective (2)
- Gets me to my destination (2)
- No wait time (2)
- Private
- Ability to contact someone for help if in an accident
- ADA friendly
- Independence
- Only means available
- Nice opportunity for “self-time”

What do you DISLIKE about the forms of transportation you use?

- Cost (11)
- Fear of safety/road rage (4)
- Traffic (4)
- Liability (2)
- Stress of driving
- Not always being able to park close to entry

What technology would make it better for you and others?

- Less expensive gas and maintenance (3)
- Not having to drive or having personal driver (2)
- Better neighborhood bus stop design
- Nearby pick up/drop off for public transport (2)
- Transport during high traffic times that is comfortable, safe, has reasonable cost and Wi-Fi
- Vehicles that were made to last longer
- Designated parking everywhere I go
- Less construction and better roads

What FORMS of
COMMUNICATION
do you currently
use?

What Forms of COMMUNICATION do you currently use to travel?

- Home Internet (12)
- Smart Phone (12)
- Smart Phone Apps (7)
- Public Internet (6)
- Work Internet (4)
- Blue Tooth (4)
- Cell Phone without internet (3)

How often?

- Multiple times throughout day (24)
- Smart Phone Apps – Daily (2)
- Public Internet – Daily (2)
- Multiple times throughout day (2)
- Work Internet – Several times a week
- Several times a week
- Cell Phone without internet – Daily
- Smart Phone –Several times a week
- Multiple times throughout day
- Blue Tooth – Daily
- Home Internet – Daily

What do you LIKE about the forms of communication you use?

- Easy to find and research information (3)
- Convenience (3)
- Privacy and security (3)
- Consistent (3)
- Fast (2)
- Good connection (2)
- Able to connect to family and friends (2)
- Ability to control my appliances
- Reasonable cost
- Ability to be productive and work seamlessly
- Can pay bills and move money around

What do you DISLIKE about the forms of communication you use?

- Poor connection (5)
- Ease for hackers to attack (2)
- Cost (2)
- Makes you lazy
- Need for updates
- Not as personal
- Addictive
- It can take you places you don't want to go
- Inconsistent
- Lack of privacy

What would make it better for you and others?

- More accessibility across community with higher speed (7)
- Lower cost (6)
- More consistency (2)
- Privacy (2)
- Security (2)

What FORMS of
TRANSPORTATION-
RELATED CELL
PHONE
Applications (Apps)
do you use?

**What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS)
do you currently use?**

- Navigation apps (14)
- Vehicle application platforms (9)
- Mobility as a Service apps (7)
- Ride-hailing apps (4)
- Smart Parking apps (4)
- Food Delivery apps

How often?

- Navigation apps – Once a week , daily (2), 1-3 times a month (2), Several times a week (2), Multiple times throughout day (5)
- Vehicle application platforms - Daily (2), Several times a week , 1-3 times a month , Multiple times throughout day (5)
- Mobility as a Service apps – Several times a week , 1-3 times a month , Multiple times throughout day (4)
- Ride-hailing apps – Several times a week , 1-3 times a month , Multiple times throughout day
- Smart Parking apps – Several times a week (2), Daily
- Food Delivery apps – Several times a week

What do you LIKE about the apps you use?

- Convenient (5)
- Fast, accurate information (3)
- Increased access to world (2)
- Coupons and discounts (2)
- Time saving (2)
- Productivity
- Reliable
- Dependable
- Don't worry about getting lost

What do you DISLIKE about the apps you use?

- Being tracked or hacked, security (3)
- Can be difficult to navigate (2)
- Inaccurate information (2)
- People stopped learning to read maps
- They can crash or freeze
- Having to remember passwords
- Service interruptions
- On-line purchasing failures
- Storage requires upgraded phone equipment

What would make it better for you and others?

- Easier to use (3)
- Being more accessible to more people/bridge digital divide (2)
- More accessible tutorials
- Being able to reserve ride-share for a specific time in order to do multiple errands
- Voice directed apps
- Having only 3-4 apps that can do everything
- 100 % accuracy
- Lower cost

How has the pandemic changed the way you live and travel?

- Limited travel (5)
- On-line doctor appointments (4)
- Video conferencing (4)
- Shopping on-line (3)
- More Walking (2)
- Food Delivery (2)
- Work from home (2)
- Driving rather than using public transport
- Too many new rules
- Everything takes longer – getting passport, birth certificate, etc.
- Can't visit friends in their homes
- More dependent on internet

Community Opinions on Future Transportation Technologies

Future
Technologies
Image Ratings

*(Refer to
Appendix A to see
rating scale
images)*

Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE)

Rating = 10

- Hyperloop (5)
- Automated cars (4)
- Automated grocery delivery (4)
- Automated ridesharing services (3)
- Drone delivery (3)
- Connected cars (2)
- Automated (self-driving) shuttles (2)
- Robot delivery (2)
- Automated paratransit services (1)

Rating = 9

- Hyperloop (2)
- Drone delivery (2)
- Robot delivery (2)
- Automated ridesharing services (1)
- Automated shuttle (1)
- Automated grocery delivery (1)

Rating = 8

- Automated paratransit services (4)
- Automated cars (3)
- Automated shuttle (3)
- Automated ridesharing services (2)
- Drone delivery (2)
- Connected cars (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 7

- Drone delivery (2)
- Connected cars (1)
- Automated ridesharing services (1)
- Automated shuttle (1)

Rating = 6

- Hyperloop (1)

Rating = 5

- Connected cars (5)
- Automated cars (3)
- Automated paratransit services (3)

- Automated grocery delivery (3)
- Automated ridesharing services (2)
- Automated shuttle (2)
- Robot delivery (2)

Rating = 4

- Automated shuttle (1)
- Hyperloop (1)

Rating = 3

- Automated ridesharing services (3)
- Automated grocery delivery (2)
- Automated cars (1)
- Connected cars (1)
- Automated shuttle (1)

Rating = 2

- Automated cars (1)
- Connected cars (1)
- Automated paratransit services (1)
- Automated grocery delivery (1)
- Hyperloop (1)

Rating = 1

- Automated paratransit services(5)
- Connected cars (4)
- Drone delivery (4)
- Robot delivery (4)
- Automated ridesharing services (3)
- Automated shuttle (3)
- Automated grocery delivery (3)
- Automated cars (2)
- Hyperloop (2)

What do you LIKE about the future technology image?

A – Automated Cars

- Safer (2)
- Increased flexibility
- Convenient
- Less stress

- Ability to multi-task
- Could reduce likelihood of drunk driver

B – Connected Cars

- Safety (2)
- Ability to communicate between vehicles (2)
- Improved traffic flow (2)
- Convenient

C – Automated Ridesharing Services

- Cost effective (2)
- No worries about driving or parking, safer
- Convenient
- No dependence on human availability

D – Automated (self-driving) Shuttles

- No worries about driver error or ability (2)
- Less traffic, increases accessibility (2)
- Environment efficiency

E – Automated Paratransit Services

- Expanded access for disabled (3)
- Decreases human error
- Don't need a driver

F – Automated Grocery Store Delivery

- Helpful for elderly or disabled (4)
- Convenient (3)
- Not having to leave home or go to the store (3)
- Efficient
- Predictable delivery schedule
- No need to hire a driver

G – Hyperloop

- Get me there faster (4)
- More travel options (2)
- Less traffic (2),
- Less stress
- Less pollution

H- Drone Delivery

- Convenient (2)
- Safe (2)
- Fast (2)
- Effective
- Futuristic
- Like having an assistant, improved accuracy

I – Robot Delivery

- Safe (2)
- Fast (3)
- No worries about delivery person
- Convenient
- Wouldn't have to go anywhere

What do you DISLIKE about the future technology image?

A – Automated Cars

- Safety concerns (4)
- Possible malfunctions (3)
- Lack of control (2)
- Drivers won't fully engage car's capability,
- Inability to react to things not programmed

B – Connected Cars

- Technical errors or malfunction (5)
- Possibility for hacking or malice (2)
- Safety issues

C – Automated Ridesharing Services

- Lack of control (3)
- Safety issues (3)
- Technical malfunction
- Reduces spontaneity
- Inconvenience

D – Automated (self-driving) Shuttles

- Technical malfunction (5)
- Safety (2)
- Lack of control

E – Automated Paratransit

- Possible need for human assistance (8)

- Safety concerns (4)

F – Automated Grocery Store Delivery

- Don't trust others to pick same quality (3)
- Loss of jobs (3)
- Accuracy (2)
- Security

G – Hyperloop

- Increased possibility of accidents at high speed (2)
- Safety (2)
- Expensive
- Disruptive to landscape and environment
- impact on jobs

H- Drone Delivery

- Crowded skies (4)
- Job impact (2)
- Accuracy of orders
- Inability to transport items over certain weight

I – Robot Delivery

- Impact on traffic (3)
- Tampering or hacking (3),
- Impact on jobs (2)
- Accuracy of orders

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars - safety, and less stress (5)
- B – Connected Cars
- C – Automated Ridesharing services (2)
- D – Automated (self-driving) shuttles (2)
- E – Automated Paratransit Services
- F – Automated Grocery Store Delivery (5)
- G – Hyperloop - faster travel options (11)
- H- Drone Delivery – increased speed of delivery (4)
- I – Robot Delivery - fast, not needing to go to the store (11)
- Fear that those who could benefit the most from these options will have the least access

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A – Automated Cars (2)
- D – Automated (self-driving) shuttles (2)

- 
- E – Automated Paratransit Services
 - F – Automated Grocery Store Delivery (2)
 - G – Hyperloop
 - I – Robot Delivery

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	● Getting from one place to another (4) ● Public Transportation (2) ● Infrastructure
What comes to mind when you hear the words "Transportation in the Future"?	● Electric vehicles (3) ● Mass transit ● More Carpooling, less buses ● Fast train ● Toll roads ● Planning and development for population needs
What comes to mind when you hear the words "Automated Vehicles"?	● Less human interaction in driving (2) ● Electric vehicles (2) ● Transportation as a service ● Environmentally friendly

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? ● Personal car (7) ● Walk ● Bike How often? ● Personal car – Multiple times a day (3), Several times a week , Daily
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What do you LIKE about the forms of transportation you use?

- Reliable (3)
- Comfortable (3)
- Convenient (3)
- Freedom to go on my schedule (3)
- Gets me to my destination (2)
- Fast

What do you DISLIKE about the forms of transportation you use?

- Cost of gas, insurance, and maintenance (4)
- Traffic (4)

What would make it better for you and others?

- Less traffic (3)
- Mass transportation (2)
- Lower cost (2)
- Better roads
- Public transportation stops closer to home

**What FORMS of
COMMUNICATION
do you currently
use?**

What Forms of COMMUNICATION do you currently use to travel?

- Home Internet (5)
- Smart Phone (3)
- Work Internet (2)
- Cell phone without internet (2)
- Smart phone apps (2)
- Blue Tooth (2)

How often?

- Home internet – Multiple times throughout day (5)
- Smart Phone – Multiple times throughout day (3)
- Work Internet – Multiple times throughout day (2)
- Cell phone without internet – Multiple times throughout day (2)
- Smart phone apps – Multiple times throughout day (2)
- Blue Tooth – Multiple times throughout day (2)

	What do you LIKE about the forms of communication you use? • Able to stay informed (2) • Staying connected (2) • Ease of use • Good privacy and security • Makes life convenient • Can listen to music • Can have it with you all the time What do you DISLIKE about the forms of communication you use? • Cost (4) • Lack of privacy and security (3) • Poor connections (3) • Unwanted advertising What would make it better for you and others? • Better security/privacy (4) • Improved coverage and connections • Lower cost
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (5) • Vehicle application platforms (4) • Mobility as a service app (3) • Ride-hailing apps (2) • Food delivery (2) • Smart Parking apps How often? • Vehicle application platforms – Multiple times throughout the day (3) • Mobility as a service apps - Multiple times throughout the day (2) • Navigation apps – Multiple times throughout the day (2) • Several times a week • 1-3 times a month • Ride-hailing apps – Multiple times throughout the day • Food delivery - Several times a week • Smart Parking apps – Multiple times throughout the day

	What do you LIKE about the apps you use? • Cuts down on wait time • Ability to be in contact with others • Fast • Easy to use • Makes travel easier • Hands free What do you DISLIKE about the apps you use? • Unreliable information at times (2) • Poor or slow connectivity (2) • Slow updates • Poor security • Advertising What would make it better for you and others? • Low cost or free internet (2) • Educate community as to what is available • More user friendly • Better connectivity • Continual updates
How has the pandemic changed the way you live and travel?	• Shopping on-line (4) • Doctor appointments on-line (3) • Video conferencing (3) • Work from home • Less travel • People more stressed out • More walking for exercise • Did not make a big difference in my travel or lifestyle

Future Technologies Image Ratings (Refer to Appendix A to see rating scale images)	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 - Automated Cars (2) - Automated ridesharing services (2) - Automated shuttle (2) - Automated paratransit services (2) - Automated grocery delivery (2) - Drone delivery (1) - Robot delivery (1) Rating = 9 - Connected cars (1) Rating = 8 - Automated Cars (1) - Connected cars (1) - Automated paratransit services (1) - Hyperloop (1) - Drone delivery (1) - Robot delivery (1) Rating = 7 - Connected cars (1) - Automated grocery delivery (1) - Robot delivery (1) Rating = 6 - Automated shuttle (1) - Automated grocery delivery (1) - Hyperloop (1)
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Rating = 5

- Automated ridesharing services (4)
- Automated cars (3)
- Automated shuttle (2)
- Automated paratransit (2)
- Drone delivery (2)
- Connected cars (1)
- Automated grocery delivery (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 4

- No responses

Rating = 3

- No responses

Rating = 2

- Automated paratransit services (1)

Rating = 1

- Connected cars (2)
- Automated cars (1)
- Automated shuttle (1)
- Automated paratransit services (1)
- Automated grocery delivery (1)
- Hyperloop (1)
- Drone delivery (1)
- Robot delivery (1)

What do you LIKE about the future technology image?

A – Automated Car

- Safer (5)
- Convenient
- Don't have to focus on driving

B – Connected Cars

- Safer, better security

- Warns of what is up ahead

C – Automated Ridesharing services

- Less traffic (3)
- Less construction
- Cost effective accessible
- Environmentally friendly

D – Automated (self-driving) Shuttles –

- Good in confined areas (airports) but not on public streets,
- Less traffic
- Get from point to point without many stops
- Environmentally friendly

E – Automated Paratransit

- Good option for people who have difficulty getting to appointments (3)
- Ensures transport available to essential places

F – Automated Grocery Delivery

- More time at home
- Convenience
- Saves time

G – Hyperloop

- Good for long distance travel
- Cuts down travel time, fantasy

H – Drone Delivery

- Less traffic
- Good for hard-to-reach areas

I – Robot Delivery

- Less traffic,
- Contactless (safer in Covid)
- Good for environment

What do you DISLIKE about the future technology image?

A – Automated Cars

- Unsafe (5)
- Expensive (2)
- Lack of control
- Distrust of technology

B – Connected Cars

- Concerns about lack of privacy/security (3)
- Lack of safety (2)
- Distracted drivers
- Technology seems far off

C – Automated Ridesharing Services

- Lack of control
- Not knowing who else will be in car
- Lack of service and delays at peak times ,
- Having to be on someone else' schedule

D – Automated (self-driving) Shuttles

- Would not feel safe (2)
- Loss of jobs (2)
- Not as common as it should be

E – Automated Paratransit Services

- Lack of human interaction if needed (4)
- Don't trust self-operated vehicles

F – Automated Grocery Delivery

- Not all products are available
- Cost
- Delivery times not reliable and frozen foods melt

G – Hyperloop

- Technology still in development
- Inefficient
- Will not carry enough people

H – Drone Delivery

- Too futuristic
- Would not want drones flying around my home
- Loss of jobs

- Not realistic

I – Robot Delivery

- Loss of jobs
- Not realistic

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars - makes life easier (3)
- C – Automated Ridesharing services - cuts down on traffic (2)
- G – Hyperloop - cuts down on travel time, may be able to travel more (5)
- I – Robot Delivery - would deliver items to my door

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A – Automated Cars
- B – Connected Cars
- C – Automated Ridesharing services
- F – Automated Grocery Delivery

Minority Focus Groups (Hispanic/Latino) - Tarrant County

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Going from one place to another (3) • Vehicles (cars, buses) (3) • Movement of goods or people (2) • Going forward • Driving
What comes to mind when you hear the words "Transportation in the Future"?	• Fast moving trains (3) • Air (2) • Technology • No gas • Futuristic • Speed & efficiency • Renewable energy
What comes to mind when you hear the words "Automated Vehicles"?	• Safe (2) • Fast • No fuel • Money • Slowing down vehicles if over a certain speed • Trusting a machine and losing control • Cars that drive themselves • Being in control

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal car (9) • Taxi/Ride Share (2) • Walk • Bike How often?
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- Personal car – Several times a week , daily (3), Multiple times throughout day (5)
- Taxi/Ride share – Several times a year (2)
- Walk - Daily
- Bike – Occasionally

What do you LIKE about the forms of transportation you use?

- Personal car – I am able to travel when I need or want to (7), reliable (3), comfortable (3), convenient , gets me to my destination , cheap (10)
- Walk – Getting from point to point in a short amount of time

What do you DISLIKE about the forms of transportation you use?

- Personal car – Increasing gas prices (4)
- Cost of maintenance (3)
- Traffic (3)
- Other drivers are not courteous
- Construction , expense , safety on highways
- Taxi/Ride share – increasing prices , not always safe

What would make it better for you and others?

- More police on highway, better enforcement (2)
- Cheaper fuel (2)
- More driver education
- Bigger highways
- Flying rather than driving Home
- Better built cars, made to last
- European town set up
- High speed trains

What FORMS of
COMMUNICATION
do you currently
use?

What Forms of COMMUNICATION do you currently use to travel?

- Home Internet (8)
- Smart phone (7)
- Work Internet (2)
- Cell phone without internet (2)
- Smart phone apps (2)
- Blue tooth
- Public Internet

	How often? • Home Internet - Daily, Multiple times throughout day (7) • Work Internet – Multiple times throughout day (2) • Public Internet – Several times a week • Cell phone without internet – Multiple times throughout day (2) • Smart phone – Daily, Multiple times throughout day (7) • Smart phone apps – Daily, Several times a week • Blue tooth – Daily What do you LIKE about the forms of communication you use? • Keeping in touch with others, work, and the world (3) • Affordable (3) • Speed of being able to complete tasks quickly or get information quickly (3) • Convenient (2) • Easy (2) • Being able to work from home • Immediate gratification • Mobility • Good connection • Consistency What do you DISLIKE about the forms of communication you use? • Lack of privacy and security, worry about hackers (5) • Cost (4) • Slow speed in some areas (2) • Poor connection (2) • Dumbing down of intelligence What would make it better for you and others? • More affordable (4) • More public access sites • Better security • More towers for better connections • More education on how to use
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Mobility as a Service (6) • Ride-hailing apps (3) • Vehicle application platforms (2) • Smart Parking apps (2) • Food Delivery apps How often? • Multiple times throughout day (3)

- Daily (3)
- Vehicle applications platforms – Daily (2)
- Mobility as a Service apps – Several times a week
- Daily (2)
- Navigation apps – Several times a week (2)
- Ride-hailing apps – Daily (2)
- Smart Parking apps – As needed
- Food Delivery apps – Daily
- Don't have time to learn them all
- Don't have many apps on my phone

What do you LIKE about the apps you use?

- Vehicle application platforms – music , makes life more enjoyable
- Mobility as a Service apps – feel safer on toll roads and they are more fuel efficient
- Navigation apps – Information for getting where I need to go (3)
- Ease , time saving , reliable
- More accurate picture of traffic and time it will take to get places , makes life easier
- Ride-hailing apps – easy to use
- Smart Parking apps – easy parking when I fly

What do you DISLIKE about the apps you use?

- Lack of consistent signal (2)
- Confusion/lack of knowledge on how to use (2)
- Cost (2)
- Maps not always accurate
- Poor connection in rural area

What would make it better for you and others?

- Reliable connections (3)
- Better understanding/knowledge of apps (3)
- Communication within apps while maintaining privacy
- Better selection to choose from

How has the pandemic changed the way you live and travel?

- Travel less (4)
- On-line shopping (4)
- Video conferencing (3)
- On-line doctor appointment (3)
- Working from home (2)
- Learned how to use my apps
- Less traffic on roads
- Driving rather than taking transit
- On-line groceries
- Food delivery
- Re-evaluated lifestyle and drive for a purpose

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings

(Refer to Appendix A to see rating scale images)

Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE)

Rating = 10

- Automated grocery delivery (5)
- Hyperloop (5)
- Automated ride sharing (4)
- Automated paratransit (4)
- Automated Cars (3)
- Automated shuttle (2)
- Connected cars (1)
- Drone delivery (1)
- Robot delivery (1)

Rating = 9

- Connected cars (2)
- Drone delivery (2)
- Robot delivery (2)
- Automated Cars (1)
- Automated shuttle (1)
- Automated paratransit (1)
- Hyperloop (1)

Rating = 8

- Automated shuttle (4)
- Robot delivery (2)
- Automated Cars (1)
- Automated paratransit (1)
- Hyperloop (1)

Rating = 7

- Automated Cars (1)
- Connected cars (1)
- Automated ride sharing (1)
- Automated paratransit (1)
- Automated grocery delivery (1)

Rating = 6

- Automated Cars (1)
- Automated ride sharing (1)
- Automated grocery delivery (1)

Rating = 5

- Connected cars (3)
- Automated ride sharing (3)
- Drone delivery (3)
- Automated Cars (2)
- Robot delivery (2)
- Automated shuttle (1)
- Automated grocery delivery (1)

Rating = 4

- Drone delivery (1)

Rating = 3

- Connected cars (2)
- Hyperloop (1)

Rating = 2

- No responses

Rating = 1

- Drone delivery (1)

- Robot delivery (1)

What do you LIKE about the future technology image?

A - Automated Cars

- Safe (2)
- Convenient (2)
- Not having to drive (2)
- Gain personal time
- Less pollution
- Less human error

B - Connected Cars

- Ability to access information about accidents (3)
- Convenient (2)
- Reduces speeding and lane over-exposure
- Stress free

C - Automated Ride Sharing Services

- Ability to travel or get around without a car (2)
- Convenient (2)
- Cost efficient
- Improved commuting
- Saves time

D - Automated (self-driving) Shuttles

- Convenient (2)
- Cost efficient
- Don't have to depend on people (staff shortages)
- Safe
- Reliable

E - Automated Paratransit Services

- Improved mobility for disabled and elderly (6)
- Safe
- Wouldn't have to wait for a driver to take them some place

F - Automated Grocery Store Delivery

- Convenient (3)
- Saves time (2)
- Less people contact during covid/safe (2)

G - Hyperloop

- Fast (5)
- Safe (2)
- May be able to go place you haven't been to before
- Less pollution

H - Drone Delivery

- Fast delivery (5)

I - Robot Delivery

- Fast delivery (2)
- Convenient
- Safe

What do you DISLIKE about the future technology image?

A - Automated Cars

- Distrust of technology (3)
- Lack of control (2)
- Safety (2)
- Expense of maintaining car (2)
- Would not like for long distance driving

B - Connected Car

- Lack of privacy/security (2)
- Safety (2)
- Lack of control

C - Automated Ridesharing Services

- Possibility of fraud
- Wait time
- Riding with a stranger
- Cost increasing

D - Automated (self-driving) Shuttles

- Questions about security (2)
- Safety (2)
- Having to wait for a shuttle

E - Automated Paratransit Services

- That not everyone has access to this (2)
- Safety of passengers (2)
- Wait time for transport causing stress

F - Automated Grocery Store Delivery

- Prefer to choose my own food
- Prefer the physical aspect of shopping
- Not having the items, I like
- Can't choose exactly what you want
- Order could go bad or be stolen

G - Hyperloop

- Safety (2)
- Limited routes
- Not available in rural areas
- Possible elimination of roads leading traffic to smaller businesses
- Don't like to be in enclosed spaces

H - Drone Delivery

- Has limitations to what can be delivered
- Unsafe
- Can be hacked
- Items can be broken, lost, or stolen

I - Robot Delivery

- Order may be stolen (2)
- Job elimination

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars – improved safety (3)
- B – Connected Cars (4)
- C – Automated Ridesharing services (2)
- D – Automated (self-driving) shuttles (2)
- E – Automated Paratransit Services (0)
- F – Automated Grocery Store Delivery – limits need to drive, saves fuel and time (4)
- G – Hyperloop – fast traveling, improved traffic flow (5)
- H – Drone Delivery
- I – Robot Delivery (2)

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A – Automated Cars (4)
- E – Automated Paratransit
- G – Hyperloop

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	● Moving from place to place (3) ● Cars (2) ● Trucks ● Transit
What comes to mind when you hear the words "Transportation in the Future"?	● Modernizing technology (2) ● Electric cars ● Self-driving cars ● Trains ● Faster and safer transportation
What comes to mind when you hear the words "Automated Vehicles"?	● Vehicles that operate without manual intervention (4) ● Train service ● Safety, fewer lives lost

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? ● Personal Car (5) ● Plane (2) ● Walking How often? ● Car – Multiple times a day (5) ● Planes - several times a year (2) ● Walking – multiple times a day ● Car – Daily
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	What do you LIKE about the forms of transportation you use? • Convenient (3) • Comfortable (2) • In control, not dependent on anyone (2) • Cost effective (2) • Reliable What do you DISLIKE about the forms of transportation you use? • Traffic (3) • Cost – gas and upkeep (3) • Don't like to drive (2) • Disrespectful drivers What would make it better for you and others? • Public transit options (bus, train, subway) (3) • Less construction (2) • Better highways with more shoulder room to pull off
What FORMS of COMMUNICATION do you currently use?	What Forms of COMMUNICATION do you currently use to travel? • Home Internet (5) • Smart Phone (5) • Smart Phone Apps (4) • Public Internet (2) • Blue Tooth (2) • Work Internet How often? • Multiple times throughout the day (5) • Daily What do you LIKE about the forms of communication you use? • Convenience (5) • Fast and easy • Reliable • Privacy What do you DISLIKE about the forms of communication you use? • Cost (4) • Poor connections (2) • GPS not always accurate • Futuristic • Impersonal What would make it better for you and others?

	• Better connectivity/access (2) • Lower cost (2) • Better high-speed options in rural areas • Internet available and billed as utility in all households
What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (5) • Ride-hailing apps (3) • Vehicle application platforms (2) • Mobility as a Service apps (2) • Smart Parking • Door Dash How often? • Several times a year • 1-3 times a month • Once a week • Several times a week • Daily • Multiple times throughout the day What do you LIKE about the apps you use? • Convenience (4) • Easy to use (3) • Not getting lost in new places What do you DISLIKE about the apps you use? • Not user friendly, difficult to use (3) • Accuracy not always up to date (2) • Using while driving not always easy • Crashing and slow speed What would make it better for you and others? • Frequent updates (3) • More user friendly (3) • Better accuracy (3) • Faster speed • Smart Car option to use while driving

How has the pandemic changed the way you live and travel?	• On-line doctor appointments (4) • Shopping on-line (4) • Groceries on-line (4) • Video conferencing (2) • Food Delivery (2) • Less vacations or travel (2) • Work from home • School from home • Walking • More driving versus public transport • Avoiding hotels and using VRBO and cabins instead
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Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings <i>(Refer to Appendix A to see rating scale images)</i>	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 • Automated ridesharing services (2) • Automated grocery delivery (1) • Hyperloop (1) Rating = 9 • Hyperloop (2) Rating = 8 • Automated ridesharing services (2) • Automated paratransit services (2) • Automated grocery delivery (2) • Automated cars (1) • Connected cars (1) • Automated shuttle (1) • Drone delivery (1) Rating = 7 • Automated cars (2) • Connected cars (2) • Automated shuttle (2) • Automated paratransit services (1) • Automated grocery delivery (1) • Drone delivery (1) • Robot delivery (1) Rating = 6 • Automated ridesharing services (1) Rating = 5 • Drone delivery (2)
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- Automated ridesharing services (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 4

- No responses

Rating = 3

- Automated cars (1)
- Robot delivery (1)

Rating = 2

- Automated shuttle (1)
- Automated paratransit services (1)

Rating = 1

- Automated cars (2)
- Connected cars (2)
- Automated shuttle (2)
- Automated paratransit services (2)
- Automated grocery delivery (2)
- Hyperloop (2)
- Drone delivery (2)
- Robot delivery (2)

What do you LIKE about the future technology image?

A – Automated Cars

- Able to multi-task (2)
- Reliable
- Less accidents

B – Connected Cars

- More safety
- Ability to get information about hazards or construction

C – Automated Ridesharing Services

- Convenience (3)
- Less wear and tear on car
- Available if you have been drinking
- Won't have to pay for parking

D - Automated (self-driving) Shuttles

- Don't have to worry about the driver's skill
- Convenient
- Saves money on gas and parking

E - Automated Paratransit Services

- Giving disabled people more mobility (2)

- Like the fact that it will exist

F – Automated Grocery Store Delivery

- Availability
- No worry about workers being out late or in bad weather
- Safer
- Convenient
- Don't have to worry about running out of products at home
- Already using this for deliveries to son in college and it works well

G – Hyperloop

- Faster travel
- Safe
- Less traffic

H – Drone Delivery

- Convenient
- Good in inclement weather
- Keeps workers out of bad weather

I – Robot Delivery

- Interesting concept
- Good in inclement weather

What do you DISLIKE about the future technology image?

A – Automated Cars

- Unsure about safety (3)
- Technology crashing concerns (2)
- Makes me too complacent

B – Connected Cars

- Technology problems (3)
- Privacy issues (2)

C – Automated Ridesharing Services

- Long wait times (2)
- Cost (2)
- Safety
- Worry about how the driver drives

D – Automated (self-driving) Shuttles

- Safety (3)
- Lack of control
- Computer error
- Availability when needed

E – Automated Paratransit Services

- Safety
- Safety of disabled patrons

- Computer error

F – Automated Grocery Store Delivery

- Accuracy (2)
- Loss of jobs (2)
- Cost

G – Hyperloop

- Safety (2)
- Scary
- Computer error
- Effect on landowners

H – Drone Delivery

- Limits on what can be delivered
- Feasibility for long distance delivery
- Safety
- Computer error

I – Robot Delivery

- Don't like the idea unless they are controlled (2)
- Computer error
- Safety

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars - less gas expense (2)
- B – Connected Cars
- C – Automated Ridesharing services - wouldn't need a designated driver (4)
- D – Automated (self-driving) shuttles
- E – Automated Paratransit Services - having room for walker is a plus
- F – Automated Grocery Store Delivery (3)
- G – Hyperloop (2)
- H – Drone Delivery
- I – Robot Delivery

If you could pick one thing to make your life easier with automated transportation, what would it be?

- B – Connected Cars
- C - Automated Ridesharing services (3)
- F – Automated Grocery Store Delivery (2)

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	● Getting around (2) ● Moving people and goods between locations ● Move from one location or another ● Lack of for residents who don't have cars ● Mobility
What comes to mind when you hear the words "Transportation in the Future"?	● Monorails or highspeed rails (2) ● More opportunities and growth ● More mobility ● Public transportation ● Electric powered vehicles
What comes to mind when you hear the words "Automated Vehicles"?	● Autopilot (6) ● More opportunities ● Accessibility, further reach

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? ● Personal car (6) ● Rideshare (2) ● Walk ● Train ● Bicycle How often? ● Personal car – multiple times a day (4), daily (2) ● Train – when travelling out of town ● Rideshare – when travelling out of town ● Bicycle – several times a year ● Walk - daily What do you LIKE about the forms of transportation you use? ● Reliable (2)
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	• Comfortable (2) • Reasonable wait times • Self-Reliant What do you DISLIKE about the forms of transportation you use? • Traffic (5) • Expensive (3) • Not safe (2) What would make it better for you and others? • Other options such as train or bus (4) • Better roads (4) • Synchronized traffic signals (2)
What FORMS of COMMUNICATION do you currently use?	What Forms of COMMUNICATION do you currently use to travel? • Smart Phone browsing internet (6) • Smart Phone apps (5) • Blue Tooth (5) • Home Internet (5) • Work Internet (4) • Public Internet (3) • Cell Phone without internet (2) How often? • Multiple times throughout day (5) • Daily What do you LIKE about the forms of communication you use? • Ease of access (4) • Instant availability of information (3) What do you DISLIKE about the forms of communication you use? • Lack of privacy and security (5) • Poor connection (5) • Cost too much (3) What would make it better for you and others? • More reasonable cost (4) • More choice in providers (2) • No dead zones (2) • More accessible to low-income families • Transportation to locations if not available in home

What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (6) • Mobility as a Service apps (5) • Vehicle application (4) • Ride-hailing apps (4) • Smart Parking Apps (3) • Others: Venmo, Food Delivery How often? • Multiple times a day (3) • Daily (2) What do you LIKE about the apps you use? • Real time information (4) • Easy to locate information (2) • Ability to multi-task (2) What do you DISLIKE about the apps you use? • Data tracking (4) • Information incorrect at times (4) • Lack of privacy and security (2) • Expense What would make it better for you and others? • Updated information • Communication about apps and how to use (2)
How has the pandemic changed the way you live and travel?	• Shopping online, order groceries on line, food delivery (5) • On-line doctor appointments (4) • Video conferencing (4) • Attending school from home (2) • Working from home • Travel less

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings <i>(Refer to Appendix A to see</i>	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 • Automated grocery delivery (3) • Hyperloop (3) • Automated paratransit services (2) • Drone delivery (2)
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*rating scale
images)*

- Robot delivery (2)
- Automated cars (1)
- Connected cars (1)
- Automated ridesharing services (1)
- Automated shuttle (1)

Rating = 9

- No responses

Rating = 8

- Automated ridesharing services (2)
- Automated shuttle (2)
- Automated paratransit services (2)
- Automated cars (1)
- Connected cars (1)
- Hyperloop (1)
- Drone delivery (1)
- Robot delivery (1)

Rating = 7

- Automated cars (1)
- Automated shuttle (1)
- Automated paratransit services (1)

Rating = 6

- No responses

Rating = 5

- Connected cars (1)
- Hyperloop (1)

Rating = 4

- No responses

Rating = 3

- Automated grocery delivery (2)
- Drone delivery (1)
- Robot delivery (1)

Rating = 2

- Automated ridesharing services (3)
- Automated cars (2)
- Automated shuttle (1)
- Automated grocery delivery (1)
- Drone delivery (1)
- Robot delivery (1)

Rating = 1

- Connected cars (2)

- Automated cars (1)
- Automated shuttle (1)
- Automated paratransit services (1)

What do you LIKE about the future technology image?

A- Automated Cars

- Safety/protection (2)
- Time saver (2)

B - Automated Grocery Delivery

- Convenience (3)

C - Automated Paratransit

- Increases mobility of impaired (6)

D - Automated Ridesharing services

- Shared cost/less expense
- Less traffic
- Timesaver

E - Automated (self-driving) shuttles

- Availability (2)
- Less traffic
- Time saver
-

F - Connected Cars

- Ability to get directions and traffic info (2)
- Protection

G - Drone Delivery

- Efficient (3)
- Safe; Good for remote medicine delivery

H - Hyperloop

- Speed (5)
- Reduced pollution (2)

I - Robot Delivery

- Efficient (4)
- Cost savings

What do you DISLIKE about the future technology image?

A - Automated Cars

- Distrust technology (6)

B - Connected Cars

- Privacy/Security

C - Automated Ridesharing Services

- Safety (4)
- Limited options for some areas (2)

D - Automated (self-driving) Shuttles

- Distrust of technology (3)
- Maintenance cost
- Time schedules
- Safety

E - Automated Paratransit Services

- Distrust of technology
- Lack of assistance for boarding/deboarding

F - Automated Grocery Store Delivery

- Errors in delivery (3)
- Products not selected for quality
- Delivery disruption

G - Hyperloop

- Cost (2)
- Comfort
- Location/accessible and not disrupting green spaces

H - Drone Delivery

- Errors in delivery (3)

I - Robot Delivery

- Errors in delivery (3)

As technology continues to advance, which of these images would you and your household consider in the future?

A - Automated Cars (2)

B - Connected Cars

C - Automated Ridesharing Services (4)

D - Automated (self-driving) Shuttles (3)

E - Automated Paratransit Services (4)

F - Automated Grocery Store Delivery (3)

G - Hyperloop (4)

H - Drone Delivery (3)

I - Robot Delivery (4)

If you could pick one thing to make your life easier with automated transportation, what would it be?

B - Connected Cars

C - Automated Ridesharing Services (2)

D - Automated (self-driving) Shuttles

H - Drone Delivery

I - Robot Delivery

Rural Focus Groups - Parker County

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Moving people and goods between locations (2) • City and church transportation is available, but it is not enough • Vehicles • Purpose and volume
What comes to mind when you hear the words "Transportation in the Future"?	• More efficient • More cement and asphalt, loss of habitat • Faster • More reliable • Easily available
What comes to mind when you hear the words "Automated Vehicles"?	• Electric vehicles (2) • Hands off driving • Uber (2) • Efficiency

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal Car (6) • Train (2) • Walk (2) • Carpool • Rideshare How often? • Personal Car – once a day (3) • Multiple times a day (3) • Once a week • Walk – several times a week What do you LIKE about the forms of transportation you use? • Gets me to my destination (3) • Reliable (2) • Controllable – there when I need it (2) • Comfortable (2) • Cost effective • Reasonable wait time What do you DISLIKE about the forms of transportation you use? • Too much traffic (2) • Cost of gas (2) • Poor drivers What would make it better for you and others? • Closer public transportation (2) • More transportation for elderly and handicapped • Better traffic flow designs
What FORMS of COMMUNICATION do you currently use?	What Forms of COMMUNICATION do you currently use to travel? • Cell phone without Internet (4) • Smart phone apps (2) • Home Internet (2) • Smart phone (2) • Blue Tooth (2) • Work Internet • Public Internet How often? • Multiple times throughout the day (3) • Every day

- Several times a week

What do you LIKE about the forms of communication you use?

- Affordable (2)
- Connectivity (2)
- Accessibility to information

What do you DISLIKE about the forms of communication you use?

- Lack of Privacy and security (2)
- Lack of providers

What would make it better for you and others?

- Better cost for internet
- If other people learned to tap into all the abilities of their technology

What FORMS of
TRANSPORTATION-
RELATED CELL
PHONE
Applications (Apps)
do you use?

What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use?

- Mobility as a Service apps (2)
- Navigation apps (2)
- Ride-hailing apps (2)
- Vehicle application platforms
- Smart Parking apps
- Food apps

How often?

- Multiple times throughout the day
- Every day
- 1-3 times a month
- Several times a year
- I don't understand it
- I only talk on my cell phone – don't use it for any text or apps

What do you LIKE about the apps you use?

- No paper maps
- Better informed

What do you DISLIKE about the apps you use?

	• Lack of privacy and security • Quality What would make it better for you and others? • Informational sessions for training
How has the pandemic changed the way you live and travel?	• Less travel • More on-line shopping • On-line doctor appointments • Working from home • Video conferencing • I did not go out for a time, but I do not buy anything on-line

Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings <i>(Refer to Appendix A to see rating scale images)</i>	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE) Rating = 10 • Automated grocery delivery (2) • Automated cars (1) • Connected cars (1) • Automated ride sharing (1) • Automated shuttle (1) • Automated paratransit services (1) • Hyperloop (1) • Drone delivery (1) • Robot delivery (1) Rating = 9 • Automated shuttle (1) Rating = 8 • No responses Rating = 7 • Automated Cars (1) • Connected cars (1)
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Rating = 6

- No responses

Rating = 5

- Automated ride sharing (2)
- Automated shuttle (1)
- Automated paratransit (1)
- Hyperloop (1)
- Robot delivery (1)

Rating = 4

- No responses

Rating = 3

- No responses

Rating = 2

- No responses

Rating = 1

- Drone delivery (2)
- Automated cars (1)
- Connected cars (1)
- Automated paratransit services (1)
- Automated grocery delivery (1)
- Hyperloop (1)
- Robot delivery (1)

What do you LIKE about the future technology image?

A – Automated Cars

- Safer
- Less stress
- Ability for manual control
- Not having to steer

B – Connected Cars

- More data means smarter
- Informed decisions

- All driving the same speed

C – Automated Ridesharing Services

- Multiple people in a vehicle
- Cost efficiency
- Reliability

D – Automated (self-driving) Shuttles

- Multiple people in a vehicle
- Safer
- More efficient

E – Automated Paratransit Services

- Need more services like this
- People being able to get around

F – Automated Grocery Store Delivery

- Not having to leave home
- Trackable
- Job creations

G – Hyperloop

- High speed
- Efficient
- Safe

H – Drone Delivery

- Smarter
- Safer
- Faster
- New jobs

I – Robot Delivery

- Safer
- Reliable
- New jobs

What do you DISLIKE about the future technology image?

A – Automated Cars

- Distrust of liability

- Lack of privacy and security
- Lack of control

B – Connected Cars

- Lack of privacy and security (2)

C – Automated Ridesharing Services

- More pollution
- Having other people in the car

D – Automated (self-driving) Shuttles

- Maintenance costs
- Space for people

E – Automated Paratransit Services

- Distrust of technology
- Lack of assistance if needed

F – Automated Grocery Store Delivery

- Distrust of technology
- Not picking the items I prefer

G – Hyperloop

- Cost (2)
- Speed

H – Drone Delivery

- Distrust of technology

I – Robot Delivery

- Distrust of technology

As technology continues to advance, which of these images would you and your household consider in the future?

- A – Automated Cars (3)
- B – Connected Cars (2)
- C – Automated Ridesharing services (2)
- D – Automated (self-driving) shuttles (1)
- E – Automated Paratransit Services (1)

- F – Automated grocery store delivery (1)
- G – Hyperloop (2)
- H – Drone Delivery (1)
- I – Robot Delivery (1)
- They are all convenient, safe, reliable and have less human error

If you could pick one thing to make your life easier with automated transportation, what would it be?

- A – Automated Cars – safer (2)
- B – Connected Cars – to help visit family and friends
- E – Automated Paratransit Services - makes life easier
- G – Hyper Loop

General Transportation Perspective

What comes to mind when you hear the word "Transportation"?	• Driving (2) • Travel • Getting from one place to another
What comes to mind when you hear the words "Transportation in the Future"?	• Improvement, advancement, progress (3) • Fast trains
What comes to mind when you hear the words "Automated Vehicles"?	• Necessary (2) • Reliable • Efficient

Community Current Transportation Experiences and Needs

What FORMS of TRANSPORTATION do you currently use to travel?	What Forms of TRANSPORTATION do you currently use to travel? • Personal car (4) • Carpool • Taxi/Ride Share How often? • Personal car – Several times a week, Multiple times throughout day (3) • Taxi/Ride Share - Several times a year (2) • Carpool – Several times a week What do you LIKE about the forms of transportation you use?
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- Freedom to set my own schedule, come and go as I please (3)
- Safe (3)
- Reliable (2)
- Companionship in carpool
- Curbside pickup and drop off

What do you DISLIKE about the forms of transportation you use?

- Expense (3)
- Tolls
- Traffic
- Poor road conditions
- Construction
- Better street maintenance

What would make it better for you and others?

- No construction/faster construction projects (2)
- Less costly vehicle maintenance (2)
- Expanded train service (2)
- No tolls (2)
- Better traffic control
- Shorter wait times for public transit

What
FORMS of
COMMUNIC
ATION do
you
currently
use?

What Forms of COMMUNICATION do you currently use?

- Home internet (4)
- Smart phone (4)
- Blue tooth (3)
- Smart phone apps (2)
- Public internet

How often?

- Home internet – Several times a week, Multiple times throughout day (3)
- Smart Phone – Several times a week, Multiple times throughout day (3)
- Blue tooth – Several times a week, Multiple times throughout day (2)
- Smart phone apps – Several times a week , Multiple times throughout day (2)
- Public internet - Multiple times throughout the day

What do you LIKE about the forms of communication you use?

- Convenience (2)
- Easy connection with people in other areas of country (2)
- Consistency (2)
- Privacy and security (2)
- Cost efficient
- Good connection

What do you DISLIKE about the forms of communication you use?

- Lack of privacy and security (4)
- Poor connection/slow speed (3)
- Expense

What would make it better for you and others?

- Better security (3)
- More providers
- Faster speed
- Lower cost

What FORMS of TRANSPORTATION-RELATED CELL PHONE Applications (Apps) do you use?	What TYPE OF TRANSPORTATION-RELATED CELL PHONE APPLICATIONS (APPS) do you currently use? • Navigation apps (4) • Vehicle application platforms (2) • Ride-hailing apps (2) • Food delivery/Shopping How often? • Navigation apps - Multiple times throughout the day (2), Several times a week • Vehicle application platforms - Multiple times throughout the day • Ride-hailing apps – Several times a week What do you LIKE about the apps you use? • Convenient (3) • Not getting lost (2) • Getting alternate route information for traffic, accidents, and construction (2) • Reliable • Hands free while driving What do you DISLIKE about the apps you use? • Poor connections (3) • Not always accurate (2) • Has made me lazy/Don't know how to get around without it anymore (2) • Distraction of reading and pushing buttons while driving What would make it better for you and others? • Better connections (2) • More accurate information • More frequent technology updates • Better security
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How has the pandemic changed the way you live and travel?	• Video conference/facetimeing (3) • Shop on-line (2) • Food delivery • Restricted travel • Become too dependent on doing everything on-line
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Community Opinions on Future Transportation Technologies

Future Technologies Image Ratings <i>(Refer to Appendix A to see rating scale images)</i>	Rate on a scale of 1-10 (10 being the strongly LIKE and 1 being strongly DISLIKE)
	Rating = 10 • Automated ridesharing services (2) • Automated grocery delivery (2) • Hyperloop (2)
	Rating = 9 • Automated grocery delivery (1)
	Rating = 8 • Automated paratransit services (3) • Automated cars (1) • Drone delivery (1) • Robot delivery (1)
	Rating = 7 • Automated ridesharing services (1)
	Rating = 6 • Hyperloop (1)
	Rating = 5 • Automated shuttle (3) • Automated cars (1) • Connected cars (1) • Automated paratransit services (1) • Automated grocery delivery (1) • Hyperloop (1) • Drone delivery (1) • Robot delivery (1)
	Rating = 4 • No responses
	Rating = 3 • Automated ridesharing services (1)

Rating = 2

- Robot delivery (1)

Rating = 1

- Connected cars (3)
- Automated cars (2)
- Drone delivery (2)
- Automated shuttle (1)
- Robot delivery (1)

What do you LIKE about the future technology image?

A - Automated Cars

- Safer
- Less pollution

B – Connected Cars

- May cut down on mistakes that cause accidents
- Less traffic jams

C – Automated Ridesharing Services

- Less impaired drivers
- Cost effective
- Less traffic

D – Automated (self-driving) shuttles

- Saves time
- Faster
- Dependable

E – Automated Paratransit Services

- More freedom to get around for those with disabilities (3)
- Much needed service

F – Automated Grocery Store Delivery

- Saves time, saves money
- Job creation

G – Hyperloop

- Get to destination faster (3)
- Less traffic

H – Drone Delivery

- Faster

I – Robot Delivery

- Faster and easier

What do you DISLIKE about the future technology image?

A - Automated Cars

- Possible technical malfunction (2)
- Safety

B – Connected Cars

- Loss of connection (2)
- Technical errors

C – Automated Ridesharing Services

- Safety
- Distrust of someone else doing the driving

D – Automated (self-driving) Shuttles

- Safety (2)
- Distrust of technology

E – Automated Paratransit Services

- Distrust of technology
- Safety
- Possible need for assistance for handicapped

F – Automated Grocery Store Delivery

- Quality of products
- Less social interaction
- Inaccuracy of order

G – Hyperloop

- Safety
- Higher possibility of fatalities with accidents

H – Drone Delivery

- Loss of jobs
- Lost packages
- Possible accidents

I – Robot Delivery

- Loss of jobs (2)
- Lost packages
- Increased traffic

As technology continues to advance, which of these images would you and your household consider in the future?

- G – Hyperloop, no traffic, faster travel (4))

If you could pick one thing to make your life easier with automated transportation, what would it be?

- G – Hyperloop (4)